

1 7 2 8 755 6 12 11.24.65

Apollo Anglicanus;

THE ENGLISH APOLLO.

Assisting

All Persons in the Right Understand-

ing of this Y E A R's Revolutions, as
also of Things past, present, and to come.

Atwofold Kalendar, viz. Julian or English,

and *Gregorian* or *Foreign* Computations, more
plain and full than any other; with the Rising
and Setting of the Sun, the Nightly Rising and
Setting of the Moon, and also her Southing,
exactly calculated for every Day.

Of General Use for most Men.

Being *Bissexile*, or *LEAP-YEAR*.

To which is added the Moon's Application to the
fixed Stars: With the Calculations of the Eclipses: Also
Rules and Tables for the measuring of Timber: With
many other things both pleasant, useful, and necessary.

Calculated according to Art, and fitted to the

Meridian of *Leicester*, whose Latitude is 52 Degrees, 41
Minutes, exactly fitting all the middle Counties of *England*,
and, without sensible Error, the whole Kingdom.

By *RICHARD SAUNDER*,

Student in the Physical and Mathematical Sciences.

The Two and Fortieth Impression of the same Author.

LONDON, Printed by A. WILDE,
for the Company of STATIONERS, 1728.



The Julian, or Old Account used in England. } 1728 { The Gregorian, or New Stile used beyond Sea.

	19	The Golden Number.		19
	2	The Dominical Letter.		2
	29	The Epact.		18
March	3	Shrove-sunday.	February	8
May	30	Ascension-day.	May	6
June	9	Whit-sunday.	May	16
December	1	Advent-sunday.	November	28

A TABLE of the TERMS and their RETURNS

Hilary Term begins Jan. 23, and ends Feb. 11

Effoin-days.	Except.	Ret. Brew.	Appear.
Oftab. Hilar. Jan. 20	January 22	Jan. 22	Jan. 23 Tu
Quind. Hilar. Jan. 27	January 29	Jan. 29	Jan. 30 Tu
Craftin. Purif. Feb. 3	Febr. 5	Febr. 5	Feb. 6 Tu
Oftab. Purif. Feb. 9	Febr. 10	Febr. 10	Feb. 12 M.

Easter Term begins May 3, and ends June 1

Quind. Pasc. May 6	May 7	May 7	May 8 W.
Tref. Pasch. May 13	May 14	May 14	May 15 W.
Mens. Pasch. May 20	May 21	May 21	May 22 W.
Quinq. Pasch. May 27	May 28	May 28	May 29 W.
Craft. Ascens. May 31	June 1	June 1	June 3 M.

Trinity Term begins June 21, and ends July 10

Craft. Trin. June 17	June 18	June 19	June 21 Fr
Oftab. Trin. June 24	June 25	June 25	June 26 W.
Quind. Trin. July 1	July 2	July 2	July 3 W.
Tref. Frin. July 8	July 9	July 9	July 10 W.

Michaelm. Term begins Oct 23, and ends Nov 2

Tref. Mich. Octob. 21	Octob. 22	Octob. 22	Octo. 23 W.
Mens. Mich. Octob. 28	Octob. 29	Octob. 29	Octo. 30 W.
Craft. Anim. Nov. 4	Nov. 5	Nov. 5	Nov. 6 W.
Craft Mart. Nov. 12	Nov. 13	Nov. 14	Nov. 15 Fr
Oftab. Mart. Nov. 18	Nov. 19	Nov. 20	Nov. 21 Th
Quind. Mart. Nov. 25	Nov. 26	Nov. 27	Nov. 28 Th

A T

William
William
Henry
Steph

Henry
Richard
John
Henry
Edward
Edward
Richard

Henry
Henry
Henry

Edward
Edward
Richard

Henry
Henry
Edward
Qu. Ma
Qu. El

James
Charles
Charles
James
Will.
Mary
Qu. A
Georg
George

A TABLE of the KINGS and QUEENS of *England*,
since the Conquest.

	Born Ann.	Began to reign.	Reign. Y. M.	Sincethair Reign ended.	Buried at
William 1	1029	1060, Octob. 14	20 11	641, Septem. 9	Caen Nor.
William 2	1056	1087, Sept. 9	12 11	628, August 2	Winchest.
Henry 1	1068	1100, Aug. 2	35 4	593, Decemb. 1	Reading
Stephen	1105	1135, Dec. 1	18 11	574, Octob. 25	Feverfham

The Saxon Line restor'd.

Henry 2	1132	1154, Octo. 25	35 9	539, July 6	Fountever
Richard 1	1155	1189, July 6	9 9	529, April 6	Fountever
John	1165	1199, April 6	17 6	512, Octob. 19	Worcester
Henry 3	1207	1216, Octo. 19	56 1	456, Nov. 16	Westmin.
Edward 1	1239	1272, Nov. 16	34 8	421, July 7	Westmin.
Edward 2	1283	1307, July 7	19 7	402, Jan. 25	Gloucester
Edward 3	1312	1326, Jan. 25	51 5	351, June 21	Westmin.
Richard 2	1366	1377, Jun. 21	22 3	329, Sept. 29	Westmin.

The Line of Lancaster.

Henry 4	1367	1399, Sept. 29	13 6	317, March 20	Canterb.
Henry 5	1386	1412, Mar. 20	9 5	307, August 31	Westmin.
Henry 6	1421	1422, Aug. 31	38 6	268, March 4	Windfor

The Line of York.

Edward 4	1442	1461, Mar. 4	25 1	245, April 9	Winchett.
Edward 5	1471	1483, April 9	0 1	244, June 18	Not know.
Richard 3	1448	1483, June 18	2 2	243, August 22	Leicester

The Families United.

Henry 7	1455	1485, Aug. 22	23 6	219, April 22	Westmin.
Henry 8	1491	1509, April 22	37 10	180, Jan. 28	Windfor
Edward 6	1537	1547, Jan. 28	6 5	175, July 6	Westmin.
Qu. Mary	1518	1553, June 6	5 4	170, Nov. 17	Westmin.
Qu. Eliz.	1533	1558, Nov. 17	44 4	126, March 24	Westmin.

The Two Kingdoms in the same Line.

James 1	1566	1602, Mar. 24	22 0	103, March 27	Westmin.
Charles 1	1600	1625, Mar. 27	23 10	79, Januar. 30	Windfor
Charles 2	1630	1648, Jan. 30	36 0	43, Februar. 6	Westmin.
James 2	1633	1684, Feb. 6	4 0	39, Februa. 13	S. Germai.
Will. & Mary	1650	1689, Feb. 13	13 1	26, March 8	Westmin.
Qu. Anne	1665	1702, Mar. 8	12 5	14, August 1	Westmin.
George 1	1660	1714, Aug. 1	12 10	1, June 11	Hanover.
George 2	1683	1727, June 11	11	Whom God grant long to Reign.	

You here may see a Race of Monarchs Great,
And in what Time each took the Royal Seat :
God set them up, the Subjects did them Crown,
The greatest Rebel dares not pull 'em down :
If some were bad, who durst them Tyrants call,
Since good, or bad, they're God's Vicegerents all.

TABLE showing the Time of the Moon's coming to the South in Hours and Minutes, every Day, for the first Six Months of this Year, 1728.

Days	January		February		March		April		May		June	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
1	1A.	3	1A.	41	1A.	5	2A.	4	2A.	48	4A.	11
2	1	44	2	22	1	44	2	55	3	42	5	1
3	2	30	3	1	2	26	3	48	4	36	5	50
4	3	9	3	41	3	10	4	43	5	31	6	40
5	3	50	4	24	3	59	5	40	6	21	7	28
6	4	28	5	9	4	50	6	36	7	9	8	17
7	5	5	6	0	5	46	7	30	7	59	9	15
8	5	50	6	55	6	43	8	22	8	54	10	13
9	6	34	7	54	7	41	9	16	9	41	11	15
10	7	22	8	53	8	39	10	6	10	37	12	16
11	8	11	9	50	9	34	10	56	11	34	0M	16
12	9	10	10	49	10	30	11	51	12	32	1	12
13	10	11	11	46	11	21	12	47	0M	32	2	9
14	11	16	12	38	12	20	0M	47	1	34	2	57
15	12	14	0M	38	0M	27	1	49	2	36	3	44
16	0M	14	1	26	1	10	2	49	3	34	4	27
17	1	9	2	16	2	3	3	48	4	27	5	6
18	1	59	3	11	3	2	4	47	5	10	5	45
19	2	48	4	8	4	1	5	43	5	56	6	23
20	3	38	5	4	4	57	6	33	6	35	7	6
21	4	33	6	4	5	56	7	17	7	17	7	48
22	5	24	7	0	6	53	7	57	7	54	8	36
23	6	12	7	54	7	45	8	38	8	36	9	28
24	7	4	8	47	8	30	9	18	9	16	10	22
25	8	5	9	39	9	14	9	57	10	1	11	19
26	9	0	10	22	9	54	10	37	10	19	0A.	15
27	9	54	11	5	10	34	11	22	11	41	1	10
28	10	50	11	46	11	14	0A	7	0A.	35	2	5
29	11	36	0A.	22	11	52	0	59	1	33	2	54
30	0A.	21			0A.	33	1	50	2	27	3	41
31	1	3			1	18			3	18		

A TABLE shewing the Time of the Moon's coming to the South in Hours and Minutes, every Day for the last Six Months of this Year, 1728.

Days	July h. m.	August h. m.	Septem. h. m.	Octob. h. m.	Novemb. h. m.	Decem. h. m.
1	4A.31	5A.56	7A.52	8A.29	9A.12	9A. 3
2	5 20	6 53	8 43	9 12	10 1	9 46
3	6 9	7 53	9 36	9 53	10 33	10 36
4	7 1	8 53	10 20	10 33	11 17	11 27
5	7 57	9 48	11 5	11 13	12 4	12 23
6	8 59	10 43	11 44	11 51	0M 4	0M 23
7	9 59	11 30	12 29	12 36	0 53	1 19
8	10 58	12 13	0M 29	0M 36	1 47	2 9
9	11 54	0M 13	1 4	1 23	2 40	2 59
10	12 46	0 55	1 44	2 10	3 35	3 46
11	0M 46	1 37	2 28	2 59	4 23	4 34
12	1 33	2 17	3 16	3 51	5 13	5 27
13	2 17	2 57	4 3	4 45	6 1	6 5
14	2 59	3 39	4 54	5 34	6 47	6 52
15	3 39	4 22	5 48	6 30	7 31	7 43
16	4 15	5 12	6 42	7 19	8 21	8 4
17	4 55	6 1	7 37	8 9	9 14	9 4
18	5 38	6 52	8 33	8 58	10 9	10 43
19	6 24	7 52	9 28	9 48	11 11	11 44
20	7 13	8 48	10 16	10 40	0A.12	0A. 48
21	8 7	9 45	11 8	11 37	1 19	1 44
22	9 2	10 36	0 0	0A.35	2 19	2 33
23	10 2	11 30	0A.53	1 36	3 17	3 18
24	10 57	0A.22	1 50	2 43	4 9	4 0
25	11 54	1 11	2 52	3 46	4 59	4 42
26	0A.46	2 2	3 55	4 46	5 40	5 22
27	1 37	2 59	4 58	5 40	6 22	6 1
28	2 25	3 54	5 58	6 27	7 3	6 46
29	3 15	4 54	6 56	7 12	7 41	7 28
30	4 13	5 54	7 54	7 53	8 20	8 14
31	5 0	6 54		8 33		9 10

To find the Time of High Water in most Parts of England, &c.

First seek the Moon's Southing in the foregoing Table for your Day, then you may conclude it High-Water at the *Ile of Wight, Southampton, Quinborough and Portsmouth*, for there the South and North Moons make a High-Water: But when you desire the Time of Full Sea in any of the following Coasts in the ensuing Table, find the Name of the Place, and see how many hours and minutes be annex'd thereunto in the Column under *H. M.* which being added to the time of the Moon's coming to the South, gives the time of High-Water at the Place required.

A Tide Table with the Names of the Havens.	H.	M.
<i>Rocheſter, Malden, Aberdeen, Weſt-end of the Nore</i>	•	45
<i>Graveſend, Downs, Thanet, Romney, Ramkins</i>	1	30
<i>Dundee, St. Andrews, Liſbon, Bell-Iſle</i>	2	15
<i>London, Tinmouth, Hartle-pool, white Bay, Amſterdam</i>	3	00
<i>Bridlington-Bay, Berwick, Oſtend, Flushing, Bourdeaux</i>	3	45
<i>Friſh, Leith, Dunbar, Narbon, Scarborough, Se-vern, Baltimore, Mounts-bay, Cork, Kingsale</i>	4	30
<i>Newcaſtle, Falmouth, Dartm. Humb. Torbay, Guernſey</i>	5	15
<i>Lyn, Antwerp, Plim. Hull, Weym. S. David's, S. Malo</i>	6	00
<i>Briſtol, Start-point, Lanion, Foulneſs</i>	6	45
<i>Millford, Bridgwater, Northcoaſt, Lands-end, Waterford</i>	7	30
<i>Portland, Peter-port, Hartſlew, Dublin</i>	8	15
<i>S. Hellens, Man-Iſle, Pool, Needles, Orford, N. & S. Forel.</i>	9	00
<i>Dover, Yarmouth, Harwich, Callice-Road, Bullein</i>	10	30
<i>Rye, Wincheſea, Caſſhot</i>	11	15

Example.

The 10th Day of *January* this Year, it is required to know the Time of High-Water at *London*: By the Table of the Moon's coming to the South, againſt *January* the 10th I find the Moon South at 7 ho. 22 min. in the aftern. the in the Tide-Table above, I find againſt *London*, 3 hours 0 min. which being added to 7 ho. 22 min. makes 10 ho. 22 min. the Time of High-water at *London*, the 10th Day of *January* in the evening; the like of any other.

Note, That the Tide floweth conſiderably more at the New and Full Moons, than at the Firſt and Laſt Quarters; as alſo the Latitude of the Moon and Wind may alter it an hour ſooner or later.

Direction

**DIRECTIONS for the subsequent DIARY
or ALMANACK.**

IN the first Column to the Left hand, on the Left-hand Page, you have the Numerical Figures of the Days of the Month.

In the second Column you have the Week-days, and the Dominical Letter.

In the third Column you have the Saints-days, and the Places of the Planets once a Month; as also the Moons Application to the Fixed Stars, by which the Afterisms and Constellations may be easily known to an ingenious Eye and Understanding.

In the fourth Column the Moon's Place in the Zodiac, every Day at Noon.

In the fifth Column the Rising and Setting of the Moon, with Respect to her Latitude.

In the sixth Column the Mutual Aspects of the Planets, with the General State of the Weather.

In the first Column on the Right-hand Page you have the *English* Account.

In the second Column you have the *Roman* Account, being now Eleven Days before ours.

In the third Column the *Roman* Week-days.

In the fourth Column the perfect *Roman* Kalendar, and Saints-days.

In the fifth Column you have a Treatise of the Rain-Bow, False Suns and Moons, &c.

The sixth, seventh, and eighth Columns, the utmost to the Right-hand, shew you the daily Rising and Setting of the Sun.

On the top of the Left-hand Page is set the New and Full Moons, with the first and last Quarters.

On the top of the Right-hand Page is set the Rising, Southing, and Setting of the Planets.

January hath xxxi Days

- First Quarter the 8th day, at 10 in the morning.
- Full Moon the 15th day, at 8 at night.
- Last Quarter the 22d day, at 1 in the afternoon.
- New Moon the 30th day, at 2 in the morning.

1	a	New Year's Day	aqua.	5	5 A.	3	Cloudy, close
2	b	D n. Sin. Hum.	aqua.	18	6	22	and raw Wea
3	c	D n. Dex. Bra.	pisces	0	7	40	ther begins
4	d	D n. Marchab	pisces	12	8	53	the Month
5	e	D n. Algenib.	pisces	24	10	5	and about the
6	f	Epiphany	aries	6	11	15	5th or 6 days
7	g	1 Sund. aft. Epip	aries	18	12	31	high Winds
8	a	D n. Pri. * Ariet.	aries	29	0 M	31	and Stormy,
9	b	Sol in Aquarius	taur.	12	1	41	followed with
10	c	D n. Pleides	taur.	24	2	54	sharp Frosts
11	d	D n. Aldebaran	gem.	7	4	6	and is likely to
12	e	D n. Alhaiot	gem.	19	5	34	* h ♀ conti
13	f	Hilary.	canc.	3	6	38	nue Sharp and
14	g	2 Sund. aft. Epip	canc.	17	7	29	Frosty, with
15	a	h 17.	leo	1	Full	—	□ ♂ ♀ storm
16	b	h 21. D.	leo	16	5 A.	13	△ ♂ ♀ of col
17	c	♂ m 19. R.	virgo	0	6	47	Rain, Snow or
18	d	♀ ♯ 22.	virgo	15	8	22	Steet about the
19	e	Pr. of Wales	libra	0	9	54	Full ☉; the
20	f	born 1706.	libra	14	11	22	△ ♀ ♀ more
21	g	3 Sund. aft. Epip	libra	28	12	52	mild and calm
22	a	D n. Linces.	scor.	12	0 M	52	Weather for
23	b	Terns begins	scor.	26	2	46	some days, but
24	c	D n. Cor. Scorpi.	sagit.	10	3	40	not without
25	d	Conv. St. Paul	sagit.	23	5	1	some brisk
26	e	D n. Pri. Cap. ♯	capr.	6	6	6	Frosts; other
27	f	D n. Au. Cor. v.	capr.	19	6	43	♂ ☉ h while
28	g	4 Sund. aft. Epip	aqua.	1	7	14	misty and fog
29	a	D n. Sin. Hu.	aqua.	14	7	13	Weather; & col
30	b	K. Charles I. Ma	aqua.	26	New	—	Rain or Snow
31	c	D n. Marchab.	pisces	8	6 A.	28	□ ☉ ♀ the en

English Account.

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19 3
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21 1
22 1
23 1
24 1
25 1
26 1
27 1
28 1
29 1
30 1
31 1

January 1728.

Rom. St. Days				<i>Saturn</i> is hid under the <i>Sun-Beams</i> , at the End of the Month is Combust. <i>Jupiter</i> at the Beginning is South between seven and eight at Night; at the End about six, <i>Mars</i> rises between eight and nine at Night. <i>Venus</i> rises between four and five in the Morning. <i>Mercury</i> emergeth, rising a little before the <i>Sun</i> .											
Rom. Calendar		Foreig. Accoun.		Englsh Accoun.											
1	12	e	Satyrus	Of the Rain-Bow false	1	8	6	3	54						
2	13	f	Hilarius	Suns and Moons, &c	2		5		55						
3	14	g	Felix	M Eeting with di-	3		4		56						
4	15	a	Mauritius	vers Account	4		2		58						
5	16	b	Marcellus	or an Halo, three Suns,	5		1		59						
6	17	c	Anthony	&c. seen at Oxford	6	7	59	4	1						
7	18	d	S. st. Ep	and several other Pla-	7		58		2						
8	19	e	Pontian	ces, in May 1727; And	8		56		4						
9	20	f	Fab. & Seb.	a great many People	9		55		5						
10	21	g	Agnes	accounting them Pro-	10		53		7						
11	22	a	Vincent	digies, or Preternatu-	11		52		8						
12	23	b	Emerent	ral, and supposing	12		50		10						
13	24	c	Timothy	them the Forerunners	13		49		11						
14	25	d	Septuages	of some grievous Ca-	14		47		13						
15	26	e	Polycarp	lamity, or the like,	15	7	46	4	14						
16	27	f	Chrysoft.	occasion'd me to pub-	16		45		15						
17	28	g	Car. Mag.	lish this short Account	17		43		17						
18	29	a	Valerius	of the Nature and	18		41		19						
19	30	b	Adelgund	Reason of such like	19		39		21						
20	31	c	Syriacus	Apparitions seen in	20		38		22						
21		Feb.	Sextages	the Clouds, as the	21		36		24						
22	2	e	Purif V.M	Rain-Bows, false Suns,	22		34		26						
23	3	f	B'ase	&c: And first of the	23		33		27						
24	4	g	Veronica	Rain-Bow: The Rain-	24		3		29						
25	5	a	Agatha	Bow is of divers Co-	25	7	29	4	31						
26	6	b	Dorothy	lours, seen in a rored	26		27		33						
27	7	c	Zachary	or dewey Cloud, cau-	27		25		35						
28	8	d	Quinquages	sed by the Beams of	28		23		37						
29	9	e	Apollonia	the Sun or Moon, oppo-	29		21		39						
30	10	f	Shrov. Tu	sited to the said Cloud.	30	7	19	4	41						
31	11	g	Ash-Wed	and therein refract and	31		17		4						
				reflected;											

February hath xxix Days.

- First Quarter the 7th day, at 6 in the morning.
- Full Moon the 14th day, at 7 in the morning.
- Last Quarter the 20th day, at 11 at night.
- New Moon the 28th day, at 8 at night.

Mont. Da.	Week Da.	Festival & Saints days, with the applicat. to the noted fixed stars	The place in the zodiac at N.	The rising fro. the full to the change, & setting fr. the cha. to the full	The mutual Aspects of the Planets, with the Various Conjunction of Air, & change of Weather
1	d	D n. Caud. Cete.	pisces 20	7A.49	Sharp Frosts
2	e	Purif. Virg. Mary	aries 2	8 54	also windy
3	f	D n. Pri. * Ariet.	aries 14	10 4	stormy at the
4	s	Sund. aft. Epip.	aries 26	11 21	beginning; and
5	a	D n. Caud. Ari.	taur. 8	12 36	♂ h ♀ conti.
6	b	D n. Pleiades.	taur. 20	0M36	△ δ ♀ num
7	f	D n. Aldebaran	gem. 2	1 48	□ ♀ ♀ rough
8	d	♂ in Pisces	gem. 1	3 12	and turbulent
9	e	D n. Luc. Ped. II	gem. 28	4 21	with plenty of
10	f	D n. Castor	canc 11	5 18	Downfal; &
11	s	Sund. aft. Epip.	canc. 25	5 54	pecially about
12	d	Term ends	leo 9	6 20	the 12 or 13
13	b	D n. Cor Leonis	leo 24	6 39	days; and pro
14	c	Valentine.	virgo 9	Full ☾	☾ Eliaht vif
15	d	h = 20.	virgo 24	7A 17	△ ♀ ♀ babe
16	e	♂ 8 24	libra 9	8 49	♂ ☉ ♀ ver
17	f	♂ 11 R.	libra 24	10 30	♂ ♂ ♀ Win
18	s	Septuagesime	scorp. 8	12 0	♂ ☉ ♂ ter-ly
19	a	♂ 19.	scorp. 23	0M 0	Weather till aft
20	b	♂ 17.	sagit. 6	1 24	the p th Moon
21	c	♂ 12.	sagit. 20	2 53	Now more mild
22	d	D n. Pr. in Ca. 1.	capr. 3	3 58	pleasant for a
23	e	D n. Luc. Vult.	capr. 16	4 43	or two, then
24	f	D n. Aust. Cor. w.	capr. 28	5 17	low; windy at
25	s	St. Matthe. Serag.	aquar. 10	5 34	* ♀ ♀ storm
26	d	D n. Aspegast	aquar. 23	5 48	Weather, with
27	a	D n. Marchab	pisces 5	6 1	Rain or Snow
28	b	☾ Elapsed in vif	pisces 17	New ☾	also some misty
29	c	D n. Aigenib.	pisces 29	6A.47	foggy days; at the end of Sharp Frosts expected.

For Account.
Ensl. Account.

1 12
2 13
3 14
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12 23
13 24
14 25
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29

February 1728.

Saturn Emergeth from under the Sun Beams, rising before him. *Jupiter* at the beginning sets about 1 in the morning; at the end about Midnight. *Mars* at the beginning rises between 6 and 7 at Night; and is then South between 1 and 2 in the Morning; at the End is South between 11 and 12 at Night. *Venus* rises between 4 and 5 in the Morning. *Mercury* is Combust

Engl. Account.	Rom. Calendar.	Rom. St. days.	Ferix Sta. & Concep.	Of the Rain-Bow, False Suns and Moons, &c.	M.D.	h.	Min.
1	12	a	Severinus	reflected; and that it	17	16	4 44
2	13	b	Eustatius	may be the better un-	2	14	46
3	14	c	Valentine	derstood, the Subject	3	12	48
4	15	d	Quadrage.	of a Rain-Bow is a	4	10	50
5	16	e	Julianus	Dewey Vapour, so far	5	8	52
6	17	f	Constance	condensed as to be re-	6	6	54
7	18	g	Concordia	solved into Drops of	7	4	56
8	19	a	Romanus	Rain, and falling; for	8	2	4 58
9	20	b	Mildred.	a comp. & and contin-	9	0	5 00
10	21	c	Esaia	ued Cloud, is not the	10	58	5 2
11	22	d	Reminisc.	Subject of a Rain-	11	56	4
12	23	e	Serenus	Bow, but those Parts	12	54	6
13	24	f	Victor M	thereof, that do no	13	52	8
14	25	g	St. Matthe.	longer hang together,	14	50	10
15	26	a	Simeon	but being by the Cold	15	48	12
16	27	b	Augustine	condensed, are distant	16	46	14
17	28	c	Oswald	one from another, di-	17	44	16
18	29	d	Oculi	vided in very many	18	42	5 18
19	30	e	David B	Drops, and are like	19	40	20
20	1	f	Cedus B.	so many little Look-	20	38	22
21	2	g	Mauritius	ing-Glaifes, which by	21	36	24
22	3	a	Adrianus.	by their innumerable	22	34	26
23	4	b	Phocas	Refractions and Re-	23	32	28
24	5	c	Victor	fractiions and their con-	24	30	30
25	6	d	Latera	joined Mixture, cause	25	28	32
26	7	e	Cyprianus	the Appearance of this	26	26	34
27	8	f	Prudent	coloured Bow. Now	27	24	36
28	9	g	Agapite	hat it cannot be made	28	22	5 38
29	10	a	40 Mart.	in a y continued Va-	29	20	40

March hath xxxi Days.

- ☾ First Quarter the 7th day, at 10 at night.
- ☾ Full Moon the 14th day, at 5 in the afternoon.
- ☾ Last Quarter the 21st day, at 11 in the morning.
- ☾ New Moon the 29th day, at 1 in the afternoon.

1	d	Qu. Caroline	aries	11	7A.57	Snow or col
2	e	Born 1681.	aries	22	9 11	Rain at th
3	f	Quinquagesima.	taur.	4 10	26	Beginning,
4	g	Dn. Caud. Arist.	taur.	18 11	54	follow'd wid
5	a	Shrove-Tuesday	taur.	28 12	1	* ☉ ☿ shar
6	b	Ash-Wednesday	gem.	11 1M	1	& frosty We
7	c	Dn. N. Prapus.	gem.	23 2	15	ther, also mi
8	d	Dn. Luped. II	canc.	6 3	17	ty and f-ggy
9	e	Sol in Aries.	canc.	20 3	59	but soon turn
10	f	Quadragesima.	leo	3 4	30	to windy and
11	g	Dn. Cor. Leonis.	eo	17 4	48	☿ h ☿ stor
12	a	Dn. Terg. Leon	virg	2 5	7	my Weather
13	b	Ember-Week.	virg.	17 5	18	and Plenty d
14	c	Dn. Vindemiati.	libra	2 Full	☾	* ☿ ☿ Snow
15	d	Dn. Spica Virg.	libra	18 7A.53		☐ ☿ ☿ or col
16	e	Dn. Lances.	scorp.	2 9	32	☿ ☿ ☿ Rai
17	f	2 Sund. in Lent	scorp.	16 11	15	therewith, and
18	g	☿ ☿ 24.	agit.	2 12	42	continues
19	a	☿ ☿ 29.	agit.	16 0M	42	windy, stormy
20	b	☿ ☿ 1 R.	capr.	0 1	55	and very un
21	c	☿ ☿ 5.	capr.	13 2	5	certain some
22	d	☿ ☿ 2 R.	capr.	26 3	28	Days; then
23	e	☿ ☿ 1.	aqua.	8 3	49	some brisk
24	f	3 Sund. in Lent	aqua.	20 4	4	☐ ☿ ☿ Frosts
25	g	Annun. B. V. M.	pisces	2 4	16	with more
26	a	Dn. Marchab.	pisces	14 4	26	mild, calm,
27	b	Dn. Algenib.	pif. es	26 4	35	and pleasant
28	c	Dn. Vert Cete.	aries	8 4	43	Weather, and
29	d	Dn pri. * Arie	aries	20 New	☾	may p obably con
30	e	Dn. Mankar.	taur.	1 8A.24		☿ ☉ ☿. mild
31	f	Mid-Lent Sund.	taur.	13 9	44	and temperate for the Season.

March 1728.

For. Account.	Rom. Calendar.	Rom. St. days.		
			<i>Saturn</i> at the beginning, rises a little after 5 in the Morning, at the end, a little after 4. <i>Jupiter</i> at the beginning, sets between 11 and 12 at Night, at the end, between 10 and 11. <i>Mars</i> at the beginning, is South between 10 and 11 at Night, at the end, between 9 and 10. <i>Venus</i> rises between 4 and 5 in the Morning. <i>Mercury</i> at the beginning, sets a little after the Sun.	
12	a	Gregory	pour, but rather from many	1 6 18 5 42
13	b	Severinus	little round Bodies, is demonstrated from the Rules	2 16 44
14	c	Judica	of Opticks, concerning the Nature of Reflection; And	3 14 46
15	d	Longinus	an artificial Rain-Bow, (as it may be called) may be	4 11 49
16	e	Hillarius	thus made: Let a Man stand with his Back toward the	5 9 51
17	f	Gertrude	Sun, and (the Sun shining) let him with some convenient	6 7 54
18	g	Edward R.	Instrument, throw Water into the Beams of the	7 4 56
19	a	Josephus	Sun, so that the Water may lose its Continuity, and be	8 2 58
20	b	Cuthbert	resolved into very small Drops: this being performed, a Rain-Bow, as it were	9 6 0 6 0
21	c	Palm Sund.	will appear in those little Drops, which represent the	10 5 58 6 2
22	d	Victor	dewey Vapour.	11 56 4
23	e	Aphrodis	The same may be observed otherways, by Water	12 54 6
24	f	Quirinus	scatter'd or thrown into the Sun Beams; and	13 52 8
25	g	An B. V. M.	though the roid Cloud, which is the Subject of the	14 50 10
26	a	Castulus	Rain-Bow, is not continued, yet to us it may appear	15 48 12
27	b	Nector	continued, by the Vicinity of its Parts to its self, and	16 46 6 14
28	c	Pascha	great Distance from us.	17 44 16
29	d	Fortuna	The efficient Causes of the Rain-Bow, are the	18 42 18
30	e	Guido	Beams of the Sun or Moon broken and reflected in those	19 40 20
31	f	Balbina	little Drops. That Reflection is altogether necessary,	20 5 38 6 22
1	g	Theodore	appears, because that both the	21 36 24
2	a	Mar. Egypt	inci.	22 34 26
3	b	Ulpianus		23 32 28
4	c	Quasmod.		24 30 30
5	d	Vincent		25 28 32
6	e	Sixtus		26 26 34
7	f	Cælestinus		27 23 36
8	g	Dionysius		28 21 39
9	a	Marcellus		29 19 41
10	b	Ezekiel		30 5 17 6 43
11	c	Misericor.		31 15 45

April hath xxx Days.

- ☾ First Quarter the 6th day, at 10 in the morning.
- ☾ Full Moon the 13th day, at 1 in the morning.
- ☾ Last Quarter the 20th day, at 1 in the morning.
- New Moon the 28th day, at 5 in the morning.

1	g	☾ n. Pleiades	taur.	26	10A.57	Moon's setting.	Fair at the be-
2	a	☾ n. Aldebaran	gem.	8	12 12		ginning, but
3	h	☾ n. Prapus	gem.	20	0M12		* ☉ h soon
4	c	☾ n. Luc. ped. ♀	canc.	3	1 19		turns to win-
5	d	☾ n. Cast. & Pol.	canc.	16	2 6		dy and show-
6	e	☾ n. Affelli	canc.	29	2 34		ry; and the
7	f	☾ Sund. in Lenc.	leo	12	3 1		or 6th day
8	g	☾ n. Cor. Leonis	leo	26	3 15		produce cold
9	a	Sol in Taurus	virgo	11	3 32		△ ☉ ♂ Rain
10	b	☾ n. Vindemiati.	virgo	26	3 43		or Snow, with
11	c	☾ n. Spica Virg.	libra	1	3 58	Moon's rising.	some frosty
12	d	h ≈ 26.	libra	26	4 8		Mornings a-
13	e	♄ ♀ 4.	scorp.	1	Full		bout thistime.
14	f	☾ Plain Sunday.	scorp.	26	10A.17		* ♄ ♀ Then
15	g	♂ ♀ 2. D.	sagit.	10	11 40		some misty Morn-
16	a	♀ ♀ 6.	sagit.	25	12 49		ings, clearing up
17	b	♀ ♀ 15. D.	capr.	8	0M49		with pleasant A-
18	c	♄ ♀ 9.	capr.	21	1 32		fternoons; also
19	d	☾ n. Luc. Man. ≈	aquar.	4	2 3		showry and dril-
20	e	☾ n. Sin. Hum. ≈	aquar.	17	2 20		ling, followed
21	f	☾ Easter Day.	aquar.	29	2 33	Moon's rising.	with some warm
22	g	☾ n. Merchab.	pisces	1	2 42		and pleasant day
23	a	St. George	pisces	23	2 52		but about the
24	b	☾ n. Algenib	aries	4	2 58		or 20th day win-
25	c	St. Mark	aries	16	3 7		dy and showy
26	d	☾ n. Prim * Ari	aries	28	3 17		than some frost
27	e	☾ n. Caud. Ariet.	taur.	10	3 29		Mornings, wa-
28	f	☾ Low Sunday.	taur.	22	New		warm and plea-
29	g	☾ n. Aldebaran	gem.	5	10A 6		sant Afternoons
30	a	☾ n. Auf. Cor. ♀	gem.	17	11 10		but about the
							New Moon for
							windy and storm
							Weather is ex-
							pected.

For Account

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April 1728.

Sarnum at the beginning rises between 3 and 4 in the Morning; at the End between 2 and 3. Jupiter at the beginning, sets a little after 10 at Night; at the end, between 9 and 10. Mars at the beginning is South, between 8 and 9 at Night; at the end, between 7 and 8, and sets then between 2 and 3 in the Morning. Venus rises about 4 in the Morning. Mercury rises before the Sun.								
12	d	Julius	incident Rays, and the Refract	1	5	13	6	47
13	e	Justinus	pals into the Part opposite	2		11		49
14	f	Tiburtus	to the lightsome Body; nor	3		9		51
15	g	Perpetua	can they return to the Sight	4		7		53
16	a	Carisus	of such as behold the Rain-	5		5		55
17	b	Anicetus	Bow, but by being reflect-	6		3		57
18	c	Jubilate	ed: Therefore in the same	7	5	16		59
19	d	Timothe	manner, as we see in Look-	8	4	59	7	1
20	e	Sulpitius	ing Glasses the Images of	9		57		3
21	f	Quintinus	Things behind us, even for	10		55		5
22	g	Emanuel	are reflected in those little	11		53		7
23	a	St. George	Looking-Glasses. Refraction	12		51		9
24	b	Albertus	is also necessary; for when	13		49		11
25	c	Cantate.	a Ray of the Sun or Moon	14		47		13
26	d	Cletus	comes to the first Drop of	15	4	45	7	15
27	e	Anastatius	the Va-	16		43		17
28	f	Vitalis	pour, it pierces the same,	17		41		19
29	g	Pet. D M.	yet so as that it is refract-	18		40		20
30	a	Eutropius	thence going on to farther	19		38		22
31	b	May S. Ph & Jac	Drops, it is at last reflect-	20		36		24
1	c	Rogate	ed, but also is again refrac-	21		35		25
2	d	Inv. Cruc.	ted in its Return; for many	22	4	33	7	27
3	e	Christoph.	Rays are refracted in many	23		31		29
4	f	Gotbard	obvious Drops, and while	24		29		31
5	g	Ascen Day	they fall in and pierce thro'	25		27		33
6	a	Juvenal	divers thinner Drops to one	26		25		35
7	b	Stanislaus	thicker, in which they are	27		23		37
8	c	Exaudi.	reflected: In their Return	28		21		38
9	d	Gordi, &c.	they are again refracted, and	29		20		40
10	e	Mamerc	every Ray, as well the In-	30	4	18	7	42
11			cident as the Reflect, is					
			twice refract in such a					
			Drop; first towards a per-					
			pendicular Line, when it en-					
			ters the Drop, because it falls					

May hath xxxi Days.

- First Quarter the 5th day, at 5 in the afternoon.
- Full Moon the 12th day, at 9 in the morning.
- Last Quarter the 19th day, at 3 in the afternoon.
- New Moon the 27th day, at 7 in the evening.

1	b	St. Phil. & Jacob	gem.	29	12A.	5	* h ♀ Windy with some
2	c	Dn. Cast. & Pol.	canc.	13	oM	5	* h ♀ Showers of drizzling
3	d	Dn. Affel i	canc.	26	o	43	Rain at the
4	e	Dn. Cap. Leon.	leo	9	1	7	☐ ☉ h begin.
5	f	Sund. aft. East.	leo	23	1	26	ing; then follows some
6	g	Dn. Terg. Leon.	virgo	6	1	41	Δ ♂ ♀ cool
7	a	Dn. Caud. Leon.	virgo	21	1	51	dry Winds
8	b	Term begins	libra	5	2	3	but soon turns
9	c	Dn. Spica Virg	libra	20	2	16	to Showers, &
10	d	Sol in Gemini	scorp.	5	2	28	may probably
11	e	4 ^m 27. St. ad R.	scorp.	19	2	45	Δ ♂ ♀ conti.
12	f	3 Sund. aft. East.	fagit.	4	Full	☉	nue showery
13	g	4 II 11.	fagit.	19	10A	27	'till after the
14	a	♂ 10.	capr.	3	11	21	Full ☉, then
15	b	♂ 11.	capr.	17	11	59	same hot days,
16	c	♀ 19.	aqua.	0	2	23	☐ h ♀ and
17	d	♂ 8.	aqua.	13	M	23	likely some
18	e	Dn. Dex. Hy	aqua	29		36	Thunder
19	f	4 Sund. aft. East.	pisces	7	0	28	Showers. Now
20	g	Dn. Marchab.	pisces	19	0	5	☐ ☉ 4. 2.
21	a	Dn. A. ge. ib	aries	1	1	5	☐ ☉ 3 hot &
22	b	Dn. Venc. Cate	aries	13	1	13	seasonable we. the
23	c	Dn. Prim. Ariet	aries	25	1	24	for several days
24	d	Dn. Manker.	aur.	7	1	35	with snow and
25	e	Dn. Pterades	aur.	19	1	49	then some brisk
26	f	Regation. fund.	gem.	1	2	9	☐ h ♀ gales of
27	g	Dn. Auf. Cor. ♂	gem.	13	New	☉	♂ u ♀ Wind
28	a	K. Ch. I. N. & R	em.	26	9A	58	☐ ☉ ♀ and pro-
29	b	Ascension Dom	canc.	9	0	43	bably
30	c		canc.	23	11	11	some Showers at
31	d	Affelli	leo	6	1	31	the New Moon

At the beginning rises between 1 and 2 in the morning, at the end between 12 and 1. At the beginning sets a little after the Sun, at the end is comblust. & at the beginning sets about 2 in the morning, at the end about 1. ♀ and ♂ rise a little before the Sun.

For. Account.	Rom. Kalend.	Rom. Sis. days.							
12	f	Poncratius	out of the Air into a thick-	14	16	7	44		
13	g	Servatius	er or more dense Medium,	2	15		45		
14	a	Boniface	viz. the said Drops. 2dly,	3	13		47		
15	h	Sophia	From the Perpendicular,	4	11		49		
16			when it goes out of the	5	9		51		
17	d	Torpet	thick Drops into the thin	6	8		52		
18	e	Venant	Air. The Rainbow there-	7	7		53		
19	f	Potentia	fore is bred when some ro-	8	5		55		
20	g	Dunstan	rid or davey Cloud being	9	4		56		
21	a	Helena	condensed, begins to be re-	10	2		58		
22	b	Hospitius	solved into Drops of Wa-	11	1	7	59		
23			ter, so as to fall down; for	12	4	8	60		
24	d	Either	if the Sun or Moon happen	13	3	8	1		
25	e	Urbanus	to be so posited in respect	14	58		2		
26	f	Quadratus	to the Beholders, as to shine	15	57		3		
27	g	Corp. Chr.	just opposite upon such a	16	56		4		
28	a	Germanus	Cloud, the lucid Beams be-	17	54		6		
29	b	Maximin.	ing variously refracted in	18	53		7		
30			these Drops, and reflected	19	52		8		
31	d	Petronel	to our Sight in form of a	20	50	8	10		
		Pamphil.	Pyramid, that Light being	21	49		11		
2	f	Marcelius	confused and mixed with	22	48		12		
3	g	Erafinus	the Shadow of these innu-	23	47		13		
4	a	Quirinus	merable little Drops, they	24	46		14		
5	b	Boniface	present to our Sight a glo-	25	45		15		
6			rious colour'd Bow. That	26	45		15		
7	d	Paulus	most Rainbows are caused	27	44		16		
8	e	Torpetus	by the Sun, few by the ☽,	28	44		16		
9	f	Barnum	seems to be from the more	29	43		17		
10	g	Getulius	frequent, due and fit Po-	30	43	8	17		
11	a		B sition	21					

June hath XXX Days.

- First Quarter the 3d day, at 11 at night.
- Full moon the 10th day, at 6 in the afternoon.
- Last Quarter the 18th day, at 9 in the morning.
- New moon the 26th day, at 6 in the morning.

1	e	n. Cor Leonis	leo	20	11 A 46	6 ☉ ♀ Cloud
2	f	San. aft. Easter	virgo	3	11 59	and dry Weat
3	g	Ann. ends	virgo	17	12 7	at the beginni
4	a	n. Vindemiati.	libra	1	o M 7	△ ♀ also
5	b	n. Spica Virg	libra	15	o 15	and dry till
6	c	n. aust. vest. 112	libra	29	o 26	7th or 9th Da
7	d	n. lanx boreal.	scorp.	14	o 44	△ ☉ ♀ whic
8	e	n. super fio. m	scorp.	28	1 1	produce Show
9	f	Whit. Sunday	fagit.	13	1 35	and probably
10	g	Sol in Cancer	fagit.	27	Full	some drifling
11	a	S. Bar K G. II. In.	capri.	11	9 A 51	Rain about the
12	b	Ember-Week	capri.	24	10 19	Full Moon,
13	c	♄ 27 St. ad ♄.	aquar.	8	10 39	then a return
14	d	♄ II 19.	aquar.	21	10 52	of hot and ful
15	e	K. Geo. II. proc.	pisces	3	11 4	♄ ♀ ♀ Weat
16	f	Trinity-Sunday	pisces	15	11 14	except some
17	g	♀ II 21.	pisces	27	11 18	Thunder Show
18	a	♀ ☽ 26.	aries	9	11 28	* ♂ ♀ about
19	b	♄ ✕ 6.	aries	21	11 38	16th or 17th da
20	c	n. Manker.	taur.	3	11 49	then an incre
21	d	Team begins	taur.	15	12 4	△ ♀ of He
22	e	n. Aldebaran	taur.	27	o M 4	and continues
23	f	San. aft. Trin.	gem.	9	o 30	☐ ♂ ♀ and ful
24	g	St. John Baptist	gem.	22	1 2	Weather, with
25	a	n. Luc. ped. II	canc.	5	1 55	some misty Mo
26	b	n. Pollux	canc.	18	New	ings, till about
27	c	n. Affelli	leo	2	9 A 29	27th or 28th da
28	d	n. Cor Leonis	leo	16	9 47	then some cool
29	e	St. Peter & Paul	virgo	o	10 1	Gales bringing
30	f	San. aft. Trin.	virgo	14	10 12	Showers.

For. Account.

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SAUNDERS, June 1728.

At the beginning rises between 11 and 12 at night, at the end a little after 10. ♀ and ♀ are very near together, rising a little before the Sun. ♂ at the beginning sets a little after midnight, at the end about 11 at night. ♀ at the beginning is combust, at the end he emergeth.

12	b	Basilistes	sition of the ☉, the Clouds,	1	3	43	8	17
13	c	3 ^{Sup. p. Trin}	and the Eyes of the Behol-	2		43		17
14	d	Valerius	ders; for the generality of	3		42		18
15	e	Vitus, &c.	People are not so frequent-	4		42		18
16	f	Rulandus	ly abroad in the Night (e-	5		42		18
17	g	Botolph	specially in showery Wea-	6		42		18
18	a	Marcus	ther) as in the Day-time.	7		41		19
19	b	Gervase	Besides there is (as well as	8		41		19
20	c	4 ^{Sup. p. Trin}	a fitting Vapour) a necessity	9		41		19
21	d	Walburg	of having the ☾ somewhat	10	3	41	3	19
22	e	Albanus	near the full (to make a ☾	11		41		19
23	f	Basilus	Rainbow) otherwise her	12		41		19
24	g	5 ^{Joh. Bapt}	Beams are too weak; also	13		41		19
25	a	Amandus	'tis requisite she be near the	14		41		18
26	b	Jeremias	Horizon; all which things	15		41		18
27	c	6 ^{Sup. p. Trin}	do seldom occur. Now why	16		42		18
28	d	Leo Pap.	only the Colours and not	17		42		18
29	e	7 ^{Pet. & Paul}	the Images of the ☉ or ☾	18		43		17
30	f	Lucina	appear in these little Look-	19	3	43		17
July	g	Tr. Sirith.	inglasses, there are these	20		43		17
1	a	Vifi. V.M.	Reasons; 1 st , because the	21		44		16
2	b	Cornelius	Cloud is not a continued	22		44		16
3	c	8 ^{Sup. p. Trin}	Body, but resolved into ve-	23		45		15
4	d	Anselm	ry little Drops or Optick	24		45		15
5	e	Tranquil.	Glasses, for in such small	25		46	8	14
6	f	Tho. Becker	Glasses the Images also are	26		47		13
7	g	Grimbald	very small, which being af-	27		48		12
8	a	Cyrrillus	terwards reflected, are so	28		48		11
9	b	7 Frates	weak as that they appear	29		50		10
10	c	9 ^{S. p. Trin}	not distinct, but confused;	30	3	51	3	9
11	d		B 2 there					

July XXXI Days.

- First Quarter the 3d day, at 5 in the morning.
 Full Moon the 10th day, at 4 in the morning.
 Last Quarter the 18th day, at 3 in the morning.
 New Moon the 25th day, at 4 in the afternoon.

1	B	gn. Vindemiati.	virgo	28	10	A 21	Fair and hot
2	a	gn. Spica Virg.	libra	12	10	33	Weather, with
3	b	gn. au. invest. n.	libra	26	10	44	some gentle
4	c	gn. Lances	scorp	10	11	3	Breezes at the
5	d	gn. bor. front. n.	scorp.	28	11	29	beginning,
6	e	gn. Cor. Scorp	scagit.	8	12	12	but the 5th or 6
7	f	gn. ult. capitis	scagit.	22	0	M 12	Thomas à Becker
8	g	gn. ult. capitis	capr.	6	1	2	* ♀ ♀ produc
9	a	h m 26 R	capr.	19	2	18	Showers, and
10	b	gn. cap.	aqua.	3			♂ h ♀ probabl
11	c	♂ II 24.	aqua.	16	8	A 50	some Thunder,
12	d	gn. Leo	aqua.	29	9	4	which increas
13	e	♂ II 10.	pisces	11	9	12	the Heat, and
14	f	gn. Leo	pisces	23	9	18	continues hot
15	g	St. Swithin	aries	5	9	30	parching
16	a	♀ III 27.	aries	17	9	40	△ h ♀ Weathe
17	b	♀ III 0.	aries	29	9	51	for some time,
18	c	gn. taurus	taurus	11	10	5	with some
19	d	♂ X 4.	taurus	23	10	25	misty Mornings
20	e	gn. Aldebaran	gemini	5	10	55	other whiles
21	f		gem.	17	11	40	some gentle
22	g	Mary Magdalen	canc.	0	12	47	Gales of Wind
23	a	gn. Cast. & Pol	canc.	13	0	M 47	but except
24	b	gn. A. felli	canc.	27	2	4	some light
25	c		leo	11			showers about
26	d	gn. Cor Leonis	leo	25	8	A 2	the New Moon
27	e	gn. Caud. Leon.	virgo	9	8	15	'twill continue
28	f		virgo	24	8	28	fair, hot and d
29	g	gn. Vindemiati.	libra	8	8	39	till the end, wh
30	a	gn. Spica Virg.	libra	23	8	53	produceth
31	b	gn. Lanx. aut.	scorp.	7	9	9	* ♀ h show

Moon's setting.

Moon's rising.

Moon's setting.

Rom. Kalend. *H* at the beginning rises between 9 and 10 at night, at the end a little after 8. *U* at the beginning rises between 1 and 2 in the morning, at the end between 12 and 1. *S* at the beginning sets between 10 and 11 at night, at the end between 9 and 10. *Q* at the latter end is combust. *Q* sets a little after the Sun.

12	D	Nab, &c.	these little drops being al-	13	52	8	3
13	E	Henricus	so in motion make the Con-	2	53		7
14	F	Bonavent.	fusion the greater; hence it	3	54		6
15	G	Swithin	is that the Image of the	4	55		5
16	A	Kenelm	or cannot appear distinct-	5	56		4
17	H	Hilarius	ly, but rather a colour. Now	6	58		2
18	I	Maternus	as to the diversity of the	7	59		1
19	D	Margaret	Colours in the Rainbow,	8	0	8	0
20	E	Praxeda	they spring from hence, be-	9	1	7	59
21	F	M. Magd.	cause some Rays enter more	10	3		57
22	G	Apollinus	deeply into the davey cloud,	11	5		55
23	A	Christiana	and are reflected by the re-	12	6		54
24	B	James	moter Droplets, others are	13	7		53
25	C	Anna	reflected from	14	9		51
26	D	Martha	nearer Vapors, and which	15	4	10	7
27	E	Panthol.	rest in the Surface of the	16	11		49
28	F	Beatrix	Clouds, by which are made	17	13		47
29	G	Abdon	divers reflexive Pyramids,	18	15		45
30	A	Germanus	having Bases equally dif-	19	17		43
31	B	Laminas	ferent. Now the Colours are	20	18		42
		Moses	chiefly 3, Red, which is the	21	20		40
2	D	Dominic.	uppermost or outmost, and	22	4	21	7
3	E	Aristarch.	is bred of the greater Splen-	23	24		38
4	F	Fest. Nivia	dor, and the Rays of that	24	26		36
5	G	Sixtus	reflexive Pyramid, whose	25	28		34
6	A	Cyriacus	Basis is of all others the	26	29		32
7	B	Theodof.	nearest our Sight, and there-	27	30		30
8	C	Laurence	fore its Rays are also stron-	28	32		28
9	D	Titus	gest, and appear of a reddish	29	34		26
10	E		Colour. The next Colour is	30	1	2	7
11	F		B 3 Green,	31	38		22

August hath XXXI Days.

- ☾ First Quarter the 1st day, at 10 in the morning.
- ☾ Full Moon the 8th day, at 5 in the Afternoon.
- ☾ Last Quarter the 16th day, at 8 at night.
- ☾ New Moon the 24th day, at 1 in the morning.
- ☾ First Quarter the 30th day, at 5 in the Afternoon.

1	C	Lammas-Day	scorp.	21	9	A	3	1	Moon's setting.	St. George's pro
2	D	Dn. Cor. Scorp	sagit.	5	10			7		Some Thunder
3	E	Dn. dex. hu. Oph.	sagit.	18	10			57		showers are
4	F	Sund. aft. Trin.	capr.	2	12			3		expected at
5	G	Dn. ult. capit. ♄	capr.	15		M		3		(* ☉ ♂ 5 d.
6	A	Dn. ault. corn. ♄	capr.	28	1			27		♂ ☉ ♀. Δ ♄
7	B	Dn. luc. caud. ♄	aqua.	11	2			52		♂ ☉ ♀ ♀. * ♂
8	C	Eclipsed invil.	aqua.	24						♂ ♀ ♀ ♀. the
9	D	Dn. Algenib.	pisces	7	7	A		26		beginning.
10	E	St. Laurence	pisces	19	7			32		* ♂ ♀. N
11	F	Sund. aft. Trin.	aries	1	7			42		fair and windy
12	G	Sol in Virgo	aries	13	7			51		for a time,
13	A	Dn. pri. * ariet.	aries	25	8			2		till about
14	B	Dn. Manker	taur.	7	8			14		* ☉ ♄. * ♄
15	C	Dn. Pleiades	taur.	19	8			33		the 15th or 1
16	D	Dn. Aldebaran	gem.	1	8			57		days, which
17	E	♄ 23 R.	gem.	13	9			33		Δ ♄ ♂ pro
18	F	Sund. aft. Trin.	gem.	25	10			29		Showers or
19	G	♄ 5 2.	canc.	8	11			41		drilling Rain
20	A	♄ m 4.	canc.	21	12			1		then 'tis hope
21	B	♄ 11.	leo	4		M		1		we may have
22	C	♄ 22.	leo	19	2			28		fair and good
23	D	Eclipsed invil.	virgo	3	4			7		Harvest Wea
24	E	St. Bartholomew	virgo	18						ther till the
25	F	Sund. aft. Trin.	libra	3	6	A		54		New Moon,
26	G	♄ 2.	libra	18	7			7		which produ
27	A	Dog-days end.	scorp.	2	7			28		ceth Showers
28	B	Dn Lanx boreal.	scorp.	17	7			45		then follows
29	C	Dn. Cor. Scorp.	sagit.	1	8			17		and good Har
30	D	Dn. dex hu. Oph.	sagit.	15	9					Weather to
31	E	Dn. fin. man. ♄	sagit.	29	10			4		end of the Mo

SAUNDERS, August 1723.

at the beginning is south about midnight, at the end between 10 and 11. Ψ at the beginning rises about midnight, at the end about 11 at night. Φ at the beginning sets about 9 at night, at the end about 8. Ω and φ at the beginning are combust, φ at the end emergeth.

For Account.	Rom. Kalend.	Rom. Sts. days.						
12	G	Clara V.	Green, which is the middle	1	4	39	7	21
13	a	Amatus	most in the Rainbow, and	2		41		19
14	b	Eusebius	is caused by the Rays being	3		42		18
15			reflected from a more deep	4		44		16
16	d	Rhocus	part of the Vapor or Cloud,	5		46		14
17	e	Agapite	and therefore it inclines	6		48		12
18	f	Helena	more to blackhefs; and the	7		50		10
19	g	Clintan	Rays also themselves are	8		52		8
20	a	Faufa	weaker, being reflected from	9		54		6
21	b	Athanas.	a place more remote; and	10		56		4
22		13 S. p. 17.	that Vapor being also far	11	4	58		2
23	d	Zacheus	ther from the Sun, is more	12	5	0	7	0
24	e	St. Barthol.	compact, and comes nearer	13		2	6	58
25	f	Severinus	to the nature of water than	14		3		57
26	g	Sopher.	the former; hereto also the	15		5		55
27	a	Ruffus	Shadows do very much	16		7		53
28	b	Augustin	contribute, which are fired	17		8		52
29		14 S. p. 17.	from the former Droplets	18		10		50
30	d	Felix	or small Glasses upon the	19		12		48
31	e	Paulinus	hindermost, with which	20	5	14	6	46
		Sept. Egidius	the Rays reflected from the	21		16		44
2	g	Anthony	hindermost are mingled;	22		18		42
3	a	Mamert	these are the Cause of the	23		20		40
4	b	Theodosia	Green Colour. The third i	24		22		38
5		15 S. p. 17.	a sort of Purple, which is	25		24	5	36
6	d	Magnus	the internal, and arises from	26	5	26		34
7	e	Regina	the Rays being reflected	27		28		32
8	f	Nat. V.M.	from a place yet more re	28		30		30
9	g	Gorgon	mote; and for the same rea	29		32		28
10	a	Hilarius	son why the second is blac	30	5	34	6	26
11	b	Felix	B 4 ker	31		36		24

September hath XXX Days.

- Full Moon the 7th day, at 8 in the morning.
- ☾ Left Quarter the 15th day, at Noon.
- New Moon the 22d day, at 10 in the morning.
- First Quarter the 29th day, at 2 in the morning.

1			capr.	12	11	Azo	
2	B	Dn. auf. Corn. vs	capr.	25	12	43	Moon's setting.
3	a	Dn. fin. hum. m	aqua.	8	0	M43	
4	b	Dn. seq. Terg vs	aqua.	20	2	0	
5	c	Dn. au. de. ma. m	pifces	3	3	23	
6	d	Dn. Marchab.	pifces	15	4	37	
7	e	Dn. Algenib.	pifces	27			Moon's rising.
8			aries	9	6	A11	
9	B	Dn. p. i. * ariet.	aries	21	6	20	
10	a	Dn. Manker	taur.	3	6	30	
11	b	Dn. caud. ariet.	taur.	15	6	47	
12	c		taur.	27	7	7	Moon's rising.
13	d	h m 21 R.	gem.	9	7	41	
14	e	Exalt. Crucis	gem.	21	8	22	
15			canc.	3	9	24	
16	B	h m 5.	canc.	16	10	44	
17	a	h m 23.	canc.	29	12	10	Moon's setting.
18	b		leo	13	0	M10	
19	c	h m 18.	leo	27	1	39	
20	d	h m 10.	virgo	11	3		
21	e		virgo	26	4	42	
22			libra	11			Moon's setting.
23	B	h m 1.	libra	27	5	A37	
24	a	Dn. Lux boreal	scorp.	12	5	56	
25	b	Dn. bor. fron. m	scorp.	27	6	21	
26	c	Dn. dex. hu. Op	sagit.	11	7	2	
27	d	Dn. fin. man. z	sagit.	25	8	3	Moon's setting.
28	e	Dn. ult. capit. v	capric.	9	9	14	
29			capr.	22	10	42	
30	B	Dn. luc. man. m	aquar.	5	12	2	

Some drifling
at the beginning
and plenty of
showers about
the third day,
* ♂ ♀. proba
will continue
showery till
after the Full
☐ ♀. Mo
then follows
some fair, wa
and pleasant d
also some misty
frosty Morning
☐ h ♂ and w
☐ ☉ ♀. ☐ ♀
Now windy
stormy, then
fair for a day
or two; then
Δ h ♀ follow
high Winds an
stormy Weathe
and is likely t
continue show
Δ h ♀ with
quent misty m
ings; at the
fair, & frosty m

Rom. Calend.
For Account.

12
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For Account.	Rom. Kalend.	Rom. Sts. days.						
			is at the beginning is south about 10 at night, at the end between 8 and 9. ♀ at the beginning rises between 10 and 11 at night, at the end between 9 and 10. ♂ at the beginning sets between 7 and 8 at night, at the end about 7. ♀ emergeth, setting after the Sun. ☉ is combust.					
1			ker or deeper than the first,	1	5	38	6	22
2	Amatus		the third is blacker than the	2		40		20
3	Exalt. Cru.		second. Now the fourth Co-	3		42		18
4	Nicomed.		lour, which they call yellow,	4		44		16
5	Feriolus		and is seen between the first	5		46		14
6	Lamper		and second, is no new Co-	6		48		12
7	Januarius		lour, but arises from the	7		50		10
8			Neighbourhood of those	8		52		8
9	Fausla		wo. As to the lunary Rain-	9		54		6
10			bow, it is much whiter or	10		56		4
11	Mauritius		paler than the solar, because	11	5	58		2
12	Tecta V. M.		the Light itself of the ☾	12	6	0	6	0
13	Rupert		is paler than that of the ☉,	13		2	5	58
14	Cleophas		and also such light Colours	14		4		56
15			appearing fainter in the	15		6		54
16	Cof. & Da.		Night, or in a weaker Light	16		8		52
17	Wenfella		than in the Day-time, or in	17		10		50
18	S. Michael		a stronger Light; but why	18		12		48
19	Hierom		the half of a Circle only	19		14		46
20	Remigius		appears, and nor the whole	20	6	16	5	44
21	Leodegar		entire Body thereof, seems	21		18		42
22			more difficult to solve. I	22		21		39
23	Francis		have met with several un-	23		23		37
24	Constance		satisfactory accounts of this	24		25		35
25	Fides		Matter, of which this is one,	25		28		32
26	Marcus		that that part only of any	26		30		30
27	Pelagia		irradiated Body is seen, from	27		32		28
28	Dionysius		which the Rays are reflected	28		34		26
29			to the same Center of Sight,	29		36		24
30	Gideon		according to equal Angles;	30	6	38	5	22
			and					

October hath XXXI Days.

- Full Moon the 7th day, at 2 in the morning.
- ☾ Last Quarter the 15th day, at 2 in the morning.
- New Moon the 21st day, at 7 at night.
- ☽ First Quarter the 28th day, at 4 in the Afternoon.

1	a	☾ n. sin. hum. ♊	aqua.	17	0	M 2	Moon's setting.	Windy, with
2	b	☾ n. dex. Brac. ♊	pifces	0	1	20		△ ☉ ♄ drilling
3	c	☾ n. Marchab	pifces	12	2	39		Rain at the be-
4	d	☾ n. cau. cet. auct.	pifces	24	3	51		△ ♄ ♀. △ ♄ ♀
5	e	☾ n. Vent. Cet.	aries	6	5	1		ginning; also
6	f	☾ 16 Sun. aft. Trin.	aries	18	6	11		stormy about
7	g	☾ n. pri. ♄ ariet.	taur.	0	Full	●		the Full Moon.
8	a	☾ n. caud. ariet.	taur.	12	5	A 1	Moon's rising.	Now some frost
9	b	☾ n. Pleiades	taur.	24	5	23		Mornings, follow
10	c	☾ n. Aldebáran	gem.	6	5	50		ed with Showers
11	d	☾ n. auct. cor. ♄	gem.	18	6	27		K. Geo. II. crown
12	e	☾ Sol in Scorpio	canc.	0	7	29		some foggy drif-
13	f	☾ 17 Sun. aft. Trin.	canc.	12	8	37		♄ ♀ ♀ ling Wea
14	g	☾ ♄ 21 St. ad D	canc.	25	10	6		ther; but after
15	a	☾ ♄ 6 St. ad ♄	leo	8	11	23	Moon's rising.	☐ ♄ ♀. ☐ ♄ ♀
16	b	☾ ♄ 7 14.	leo	22	12	46		the 15th day som
17	c	☾ ♄ m 22.	virgo	5	0	M 46		△ ☉ ♄. frosty
18	d	☾ St. Luke	virgo	20	2	11		Mornings, with
19	e	☾ ♄ m 26.	libra	5	3	51		fair, calm and
20	f	☾ 18 Sun. aft. Trin.	libra	20	5	17		K. Geo. I. crown
21	g	☾ ♄ 29.	scorp.	5	New	●	Moon's setting.	pleasant Wea-
22	a	☾ n. Lanx. Bor.	scorp.	20	4	A 26		ther till the
23	b	☾ Term begins	lagit.	5	5	0		New Moon, the
24	c	☾ n. dex. hu. oph.	lagit.	20	5	53		follows cold
25	d	☾ Crispin	capri.	4	7	1		* ♄ ♂ Winds
26	e	☾ n. postin cap. 7	capri.	18	8	23		and stormy, bring
27	f	☾ 19 Sun. aft. Trin.	aqua.	1	9	44		ing cold Rain
28	g	☾ St Simon & Jude	aqua.	14	11	9	Moon's setting.	or Snow there-
29	a	☾ n. dex. Brac. ♊	aqua.	27	12	26		with, and conti
30	b	☾ K. Geo. II. Nat.	pifces	9	0	M 26		nues raw and w
31	c	☾ n. Marchab.	pifces	21	1	38		to the end.

SAUNDERS, October 1728.

♂ at the beginning is south about 8 at night, at the end about 7. ♀ at the beginning rises near 9 at night, at the end between 7 and 8. ☿ sets between 6 and 7 at night. ♀ and ☿ all this Month are very near together, setting about half an Hour after the Sun.

1	2	e	Colman	and of a radiated Cloud no.	1	6	40	5	20
2	13	f	Edward	thing is seen but what is	2		42		18
3	14	g	Calixtus	carried by Rays collected in	3		44		16
4	15	a	Severus	the same Point of the Axis	4		46		14
5	16	b	Gallus	wherein the Sight is, but	5		48		12
6	17	c	St. S. p. Tr.	these do make only a Bow;	6		50		10
7	18	d	St. Luke	howbeit 'tis generally ob-	7		52		8
8	19	e	Ptolomy	served, that the Center of	8		54		6
9	20	f	Wendelin.	the lucid Body, of the Sight,	9		56		4
10	21	g	Cordula	and of the Rainbow, being	10	6	58		2
11	22	a	40 V. Mar.	always in one and the same	11	7	05		0
12	23	b	Romanus	right Line, that the Rain-	12	7	24		58
13	24	c	St. S. p. Tr.	bow (when but one) ma-	13		4		56
14	25	d	Crispin.	keth an Angle, at the Eye	14		6		54
15	26	e	Amandus	of the Observer, with the	15		8		52
16	27	f	Urfula	said Line, of about 41 De-	16		10		50
17	28	g	Sim & Jud.	grees; but if the Cloud be	17		12		48
18	29	a	Narcissus	of a proper constitution, as	18		14		46
19	30	b	Theonest.	the distance of 42 Degrees	19		16		44
20	31	c	23 S. p. Tr.	from the said Line or Axis,	20	7	18	5	42
21		d	Nov. All Saints	then there doth appear a	21		20		40
22	2	e	All Souls	second Bow, or at least part	22		21		39
23	3	f	Theophil.	of a second, and more than	23		23		37
24	4	g	Amandus	two I never did see at once.	24		25		35
25	5	a	Lætus	Now why the Rainbow ne-	25		27		33
26	6	b	Leonard	ver makes a perfect Circle,	26		29		31
27	7	c	24 S. p. Tr.	but only a Semicircle, or an	27		31		29
28	8	d	Theodore	Arch less than a Semicircle,	28		33		27
29	9	e	Severus	is, as was said before, be-	29		35		25
30	10	f	Martin P.	cause the Center of the ☉,	30		37	5	23
31	11	g	Martin B.	of	31	7	38		22

November hath XXX Days.

- Full Moon the 5th day, at 8 at night.
- ☾ Last Quarter the 13th day, at 2 in the Afternoon.
- New Moon the 20th day, at 5 in the morning.
- ☾ First Quarter the 27th day, at 9 in the morning.

1	d	All Saints	aries	3	2M46	Moon's setting.	☐ ☉ h windy
2	e	All Souls	aries	15	4 4		stormy, with co
3		☉ Sun. alt. Trin.	aries	27	5 17		Rain or Snow,
4	g	☽ n. caud. ariet.	taur.	9	6 28		and about the
5	a	☽ n. wdr. p. 101.	taur.	21	Full		Full Moon
6	h	☽ n. Aldebaran	gem.	3	3 A50	Moon's rising.	♂ ♀ plenty
7	c	☽ n. aust. corn. ♂	gem.	15	4 31		of moisture;
8	d	☽ n. Luc. ped. II	gem.	27	5 24		also close, mist
9	e	☽ n. Castor	canc.	9	6 29		* h ♀ and fog
10		☉ Sun. alt. Trin.	canc.	22	7 46		Weather; then
11	g	St. Martin	leo	5	9 6	Moon's rising.	follows high
12	a	☉ in Sagittar.	leo	18	10 32		♂ h ♂ Winds
13	h	☽ n. Terg. Leon.	virgo	1	11 53		clearing the Ski
14	c	☽ n. Caud. Leon.	virgo	15	13 15		and may prob-
15	d	☽ n. Vindemiati.	virgo	29	1 M15		bably turn to
16	e	☽ n. Spica Virg.	libra	13	2 38	Moon's setting.	a sharp frosty
17		☉ Sun. alt. Trin.	libra	28	4 11		Air, and contin
18	g	☽ n. Lanx boreal.	scorp.	13	5 55		so, except som
19	a	☽ n. Bor. front. m	scorp.	28	7 26		♂ ♀ drifling
20	h	♂ ♀ 22 D.	sagit.	13	0		Rain or Sleet
21	c	♂ ♀ 3 B.	sagit.	28	4 A30	Moon's setting.	about the New
22	d	♂ ♀ 12.	capr.	13	5 50		Moon, yet the
23	e	♀ ♀ 9.	capr.	27	7 17		♂ ☉ Frost
24		☉ Sun. alt. Trin.	aqua.	10	8 42		continues, with
25	g	♀ ♀ 9. B.	aqua.	23	10 1		Storms of Sno
26	a	♂ ♀ 27.	pisces	6	11 17	Moon's setting.	or cold Rain a
27	h	☽ n. Marchab.	pisces	18	12 29		bout the 25th
28	c	☉ Sun. alt. Trin.	aries	0	0 M29		26th days, and
29	d	☽ n. Vent. Cet.	aries	12	1 35		such like winte
30	e	☉ Sun. alt. Trin.	aries	24	2 48		Weather to the
							end.

H at the beginning is south about 6 at night, and sets then between 10 and 11 at night; at the end he sets between 9 and 10. *A* at the beginning rises between 6 and 7 at night, at the end about 5. *G* and *I* at the end are very near together, and set about 6 at night. *Q* towards the end is combust.

Port. Account.	Rom. Calend.	Rom. Sids. days.							
12	a	Ludovic.	of the Sight, and of the Rain-	17	39	5	21		
13	b	Afcancias	bow, are in one and the same	2	41		19		
14			right Line, therefore the	3	43		17		
15	b	Leopold	Bow can be no greater in	4	45		15		
16	e	Edmund	the Cloud than a Semicir-	5	46		14		
17	f	Hugo	cle, and so much as the lucid Bo-	6	48		12		
18	b	Hezechia	dy is elevated above the Hori- on,	7	49		11		
19	a	Elizabeth	so much is the Center of the Bow	8	51		9		
20	b	Eugenius	depressed below the Horizon,	9	52		8		
21			and then must the Bow be less	10	7	54	4	6	
22	b	Cæcilia	than a Semicircle, and can never	11	55		3		
23	e	Clement	be a full Semicircle but when the	12	57		3		
24	f	Chryfog.	lucid Body is in the Horizon,	13	58		2		
25	b	Catharine	the Center of the Bow then be-	14	8	0	4	0	
26	a	Conradus	ing in the opposite part, and the	15	8	1	3	59	
27	b	Ruffus	higher the Sun or Moon is ele-	16	2		58		
28			vated the less is the Bow, and if	17	4		56		
29	b	Saturnus	the Elevation be more than 41	18	5		55		
30	e	S. Andrew	Degrees, there can then be no	19	6		54		
			appearance of a Rainbow, altho'	20	7		53		
			the Clouds should be most fitly	21	8		52		
			disposed to receive such Irradia-	22	9		51		
			tion. Some have been of opini-	23	10	3	50		
			on that there was neither Rain	24	8	11	49		
			or Cloud, and consequently no	25	12		48		
			Rainbow, before Noah's Flood.	26	13		47		
			Others have been of opinion that	27	14		46		
			there was all, but that God was	28	15		45		
			pleased not to make the Bow a	29	15		45		
			Sign or Token of his Promise	30	8	16	3	44	
			and Covenant with all Flesh till						
			after the Flood. Of Kin to						
			Rainbows are the false Suns,						
			which sometimes are placed by						
			the true Sun. Now the Parelio'						
			or false Sun is the Image of the						
			Sun						

December hath XXXI Days.

- Full Moon the 5th day, at 2 in the Afternoon.
- Last Quarter the 13th day, at 1 in the morning.
- New Moon the 19th day, at 5 at night.
- First Quarter the 27th day, at 6 in the morning.

1	a	Advent Sunday	taur.	6	4M	1	Moon's setting.	Mild and te
2	b	☾ n. Pleiades	taur.	18	5	22		♂ ♀ rate,
3	a	☾ n. Aldebaran	gem.	0	6	31		* ☉ h some
4	b	☾ n. auf. corn. ☽	gem.	14	7	56		Frosts at the
5	c	☾ n. dex. hu. auri.	gem.	24	Full			ginning, and
6	d	☾ n. Castor	canc.	7	4A	13		may hold ten
7	e	☾ n. Pollux	canc.	19	5	20		rate for the
8	f	2 Sund. in Adv.	leo	2	6	41		son, till the
9	g	☾ n. med. coll. ☽	leo	15	8	3		or 10th Days
10	a	Sol in Capricorn	leo	29	9	24		then plenty of
11	b	☾ n. Caud. Leon.	virgo	12	10	55		♂ ☉ h Mois
12	c	☾ n. pri. au. al. ♀	virgo	25	12	14	Moon's rising.	is expected,
13	d	Lucia Virg.	libra	10	0M	14		windy there
14	e	h ≈ 24.	libra	24	1	35		afterwards so
15	f	2 Sund. in Adv.	scorp.	8	3	8		gentle frosty
16	g	♄ ☽ 0 R.	scorp.	23	4	43		ther, and mi
17	a	♂ ≈ 1.	sagit.	7	6	19		for the Seal
18	b	Ember-Week	sagit.	22	7	33		but about t
19	c	♀ ≈ 11.	capric.	6	New			New Moon
20	d	♀ ♄ 20 D.	capri.	21	4A	28		yielding, wi
21	e	St. Thomas	aqua.	5	5	55		drilling Rain
22	f	4 Sund. in Adv.	aqua.	18	7	21		Snow or Slec
23	g	♄ ≈ 26.	pisces	1	8	40		after which
24	a	☾ n. Marchab.	pisces	14	9	57		* ♄ ♀ F
25	b	Nativ. of Christ	pisces	26	11	11		returns, and
26	c	St. Stephen	aries	8	12	23		tinues frosty
27	d	St. John	aries	20	0M	25	Moon's setting.	♂ ♄ ♀ with
28	e	Innocents	taurus	2	1	35		and then for
29	f	1 Sund. aft. Chr.	taur.	14	2	46		brisk Winds
30	g	☾ n. Pleiades	taur.	26	4	4		the end of th
31	a	☾ n. Aldebaran	gem.	8	5	15		♂ ♄ ♀ Snow

SAUNDERS, December 1728.

For Account.
Rom. Sts. days.
Rom. Kalend.
1₂ at the beginning sets between 8 and 9 at night, at the end between 7 and 8. 2₄ at the beginning rises about half an hour after Sun-set, and is then south between 12 and 1 at night; at the end he is south about 11 at night. 3 and 4 at the beginning set near together between 5 and 6 at night; at the end 4 sets with 1₂. 5 rises before the Sun.

12	S. in Ad.	Sun received in a Cloud, continued compact, equal, ready to	13	16	3	44
13	a Lucia V.	turn to Water, in its fore part	2	17		43
14	e Nicasius	transparent, and as it were polished, in its hinder part dark	3	17		43
15	f Abraham	and terminated, and placed obliquely on one side the Sun; and	4	18		42
16	g Ananias	sometimes the Sun hath had such like on each side, from whence	5	18		42
17	a Lazarus	the Image of the Sun hath been reflected to our Sight, as from a	6	18		42
18	b Rufus	Lookinglass, or Lookinglasses	7	19		41
19	c S. in Ad.	Pliny writes, that to his Time there had never been more than	8	19		41
20	d Ammon	three seen at once, but since it hath been reported that more	9	19		41
21	e S. Thomas	have been seen at once: but these false Suns seldom appear,	10	19	3	41
22	f 30 Mart.	because there is seldom seen a Cloud that hath such a disposition and such a posture to the	11	19		41
23	g Victor	Sun. I remember when I was a young Lad I once saw the Appearance as it were of 3 Suns, but	12	19		41
24	a Ad. & Eve	in a different manner from what is before related. It was in a	13	19		41
25	b Christmas	glorious Sunshine Day there appeared in the Heavens two great	14	18		42
26	c S. Stephen	white Circles like to the Halo's, but much larger in compass than	15	18		42
27	d St. John	they usually appear, one of them had the Sun for its Center, the	16	18		42
28	e Innocents	Center of the other was far distant, these two Circles did intersect one another in such manner,	17	17		43
29	f Jonathan	that the Intersections were considerably distant, in these Intersections was the appearance as it	18	17		43
30	g David	were of two Suns.	19	16		44
31	a Silvester		20	16	3	44
1	1729 Circum.		21	15		45
2	2 S. p. Ch.		22	15		45
3	c Enoch		23	14		46
4	d Methusal.		24	14		46
5	e Simeon		25	13		47
6	f Epiphany		26	12		48
7	g Juliana		27	11		49
8	a Echard		28	10		50
9	1 S. p. Epip.		29	9		51
10	c Marcellus		30	8	3	52
11	d Nicanor		31	7		53

A TABLE shewing how many Years Purchase a Lease or Annuity (to endure for any number of Years under 33) is worth presently, at Interest upon Interest, at Six in the Hundred and shewing plainly how to discount any Lease in being and the value of the Reversion after any number of Years.

The Use and Explanation of the TABLE.					
Years of Lease.	Years.	Months.	10th parts.	Years of Lease.	Years. Months.
1	0	11	0	17	10 5
2	1	9	9	18	10 9
3	2	8	1	19	11 1
4	3	5	9	20	11 5
5	4	2	5	21	11 9
6	4	11	1	22	12 0
7	5	7	0	23	12 3
8	6	2	7	24	12 6
9	6	9	9	25	12 9
10	7	4	3	26	13 0
11	7	10	7	27	13 2
12	8	4	0	28	13 4
13	8	10	3	29	13 7
14	9	3	6	30	13 9
15	9	8	5	31	13 11
16	10	1	3	32	14 1

The first Column towards the left Hand, sheweth the Years of a Lease.

or Annuity; and right against each Year, is the Years, Months, and Tenth Parts of a Months Purchase, that such a Lease or Annuity is worth. Example.

Suppose a Lease or Annuity to continue 12 Years, and you would know how many Years Purchase it is worth in present Money, look in the Table for Twelve Years of a Lease to the Left Hand, and against the same you shall find 8, 4, 6, which sheweth that such a Lease is worth 8 Years, 4 Months, and 6 Tenth Parts of a Months Purchase.

AGAIN,

If you are to take or buy the Reversion of any Lease or Annuity, work thus: Suppose the Lease to be thirty Years in a you find in the Second Table and Right Hand against Thirty 13 Years, 9 Months, and 2 Tenth Parts of a Months Purchase: this it were worth were it in present Possession. But suppose there be a Lease of five Years (more or less) before you commence, look in the Table against the five Years, and there you find 4 Years, 2 Months, and 5 Tenth parts of a Months Purchase: Take this out of the Sum against Thirty, which is 13, 9, 2, the Remainder is, 9, 6, 7, which is 9 Years Months, and 7 Tenth Parts of a Month; and so much is the Reversion after 5 Years, worth the Remainder of 30 Years.

This is Useful, and very Easy.

SAUNDER, 1728.

The SECOND PART.

Containing the Eclipses; the Suns Quarterly Ingresses; the Southings of the 7 Stars for every 5th Day of this Year; with Directions for finding the Rising, Southing and Setting of several Fixed Stars: As also, Rules & Tables to measure Timber: And other Things worth Observation.

The Characters of the Twelve Signs, and what parts of the Body they are said to govern.

♈ Aries, Head & Face; ♉ Taurus, Neck & Throat; ♊ Gemini, Arms & Shoulders; ♋ Cancer, Breast & Stomach; ♌ Leo, Heart & Back; ♍ Virgo, Bowels & Belly; ♎ Libra, Reins & Loins; ♏ Scorpio, Secrets; ♐ Sagittary, Thighs; ♑ Capricorn, Knees; ♒ Aquarius, Legs; ♓ Pisces, the Feet.

The Characters of the planets, with the Dragons Head and Tail, ♄ Saturn, ♃ Jupiter, ♂ Mars, ☉ Sol, ♀ Venus, ☿ Mercury, ☾ Moon, ♁ Dragons Head, ♂ Dragons Tail.

The Aspects.

♊ Conjunction, * Sextile, ☐ Quartile, △ Trine, ♂ Opposition.

A Brief Chronology of Memorable Things, to this Year, 1728.

T HE Creation of the World	5677
Noah's Flood	4021
The Destruction of Sodom and Gomorrah	3620
The Destruction of Troy	2910
Brute entered this Island	2835
The Building of London	2835
The Building of York	2717
The Building of Leicester	2671
The Building of Canterbury	2620
The Building of Stamford	2551
The Building of Rome	2480
The Destruction of Jerusalem by T. Vesp.	1641
England first received the Christian Faith	1548
The Tower of London built	1163
Duke William conquered England	662
Westminster Hall was built	629
The Bible divided into Chapters	538
	The

	The Invention of Guns	35
	The Art of Printing	28
	St. Pauls Steeple fired	16
	New Star in Cassiopeia	15
	A great Snow fell Feb. 4.	15
	Tilbury Camp on St. James's day	14
	A Plague in London, whereof dyed 30598	12
	Gunpowder Treason, November 5.	12
	A great Snow, and Smithfield paved	11
	A great Plague in London, whereof dyed 35418	11
	The Long Parliament began, November 3.	10
	King Charles the First was Murdered	8
	Two Comets appeared in December and March	8
	The doleful Plague that followed them	8
	London was burnt, September 2, 3, 4, 5	8
	The last great Snow	7
	The wonderful Comet in December	7
	A Comet in August	7
Since	The terrible Fire in Wapping, November 19.	7
	A great Earthquake, October the 6th	6
	The last great Frost	6
	The Rebellion in the West	6
	The seven Bishops sent to the Tower, June	6
	The Prince of Orange Landed, November 5.	5
	King William went to Ireland with an Army, June	5
	The French Fleet beaten by the English and Dutch, &c.	5
	Our most Gracious Queen Mary Dyed, Dec. 28.	5
	The Horrid Conspiracy to Assassinate His Majesty King William, and to bring in the French, was happily disc.	5
	The Peace concluded with France	5
	War again proclaimed against France, &c.	5
	Gibraltar taken by the English & Dutch Fleet, July	5
	The Glorious Battle of Blenheim, where the French	5
	were Beaten by the Confederates	5
	The Famous Battle of Ramillis, wherein the French	5
	were beaten by the Confederates	5
	England and Scotland made one Kingdom, by the	5
	Name of Great Britain, May 1.	5
	Peace again concluded with France, 1713	5
	King George 1. proclaim'd Aug. 1. 1714.	5
	King George 1. died, June 11. 1727.	5
	King George 2. proclaimed, June 15. 1727.	5

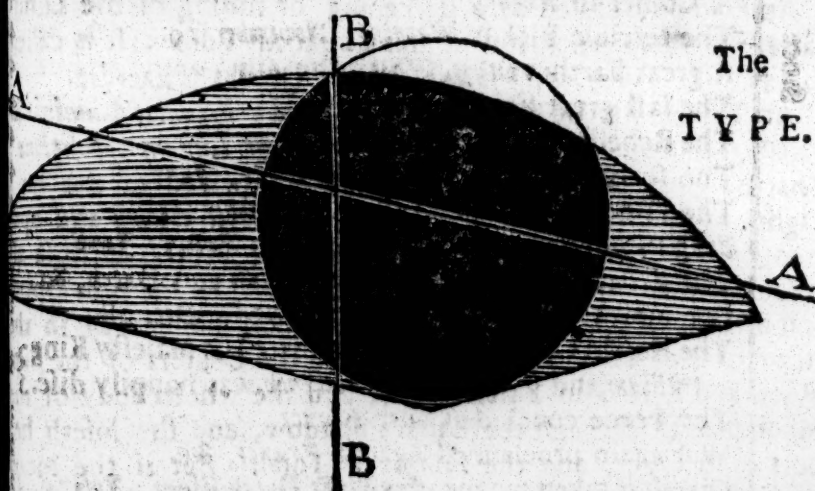
SAUNDERS, 1728.

Of the Eclipses this Year, 1728.

FOUR Times will the two great Luminaries of Heaven be eclipsed to the Inhabitants of this Terraqueous Globe; twice the Sun, and twice the Moon; they happen in the following Order.

The first Eclipse is of the Moon, on the 14th day of February, in the Morning, as followeth;

	h.	'	"
The Beginning	5	35	23
The true Ecliptick ☿	6	58	49
Greatest Obscuration	7	4	15
The End	8	32	07
Total Duration	2	55	44
Digits eclipsed	9 d.	51	15



A represents the Way of the Moon passing thro' the Earth's shadow; BB a vertical passing through the Shadow. The Moon sets at 6 h 58 m. which is 6 m. before the middle of the Eclipse, so that the latter half of the Eclipse will not be seen here; but to those that dwell about 2 h. West from England, they see the whole Eclipse. Note, This Eclipse is computed from new Tables composed by our annual Brother Mr. Edmund Weaver Fricstone, in the County of Lincoln.

SAUNDER, 1738.

The second Eclipse is of the Sun, on the 28th of February, about 8 at Night, and consequently invisible here; but will be conspicuous (if the Air be clear) to the Inhabitants of California, New Spain, New Mexico, and the greatest part of North America and to them that sail in the Pacifick Ocean, on the North of the Equinoctial Line.

The third Eclipse is of the Moon, August the 8th, about 5 in the Afternoon, and therefore invisible here, by reason the Eclipse is over before the Moon rises: But it will be visible to all Asia, the most Eastern Parts of Europe, and Africa; as Russia, Muscovia, the lesser Tartary, Arabia Felix, Ambissina, the islands Madagascar, Bourbon, &c.

The fourth and last Eclipse will be of the Sun, on the 24th day of August, about one in the Morning, and consequently invisible here; but to our Antipodes, Van Diemens Land, Zealandia Nova, Guinea Nova, &c. it will appear a great Eclipse.

An Eclipse is caused by a darkening or hiding of the Luminaries by the interposition of some opacous Body: It is called in Latin *Deliquium* or *Defectus*, by the Greeks *Ἐκλειψις*.

An Eclipse of the Moon is thus defined; *Privatio Luminis in Luna orta à diametrali Terra inter Solem & Lunam oppositione*: That is, when the Body of the Moon is deprived of the Sun's Light, by the direct Interposition of the Earth's solid and opacous Body between the Sun and her. The Moon's Eclipse always happens when she is in the Full, for then she is in Opposition to the Sun; and if this Opposition happeneth in the Head or Tail of the Dragon, then are the Centers of the Sun, Moon and Earth, in a straight Line, and the whole Body of the Moon passeth through the Earth's Shadow, and she loseth her borrowed Light, and the Eclipse is Total. But if the Moon doth incline from either of the Nodes, yet if her Latitude be less than the Sum of the Semidiameters of the Moon and the Earth's Shadow, she will be Eclipsed; But if her Latitude exceed, there will be no Eclipse that Full. Therefore, the Quantity of the Defect, and the Continuance, is known by the Quantity of the Moon's Motion, of her Latitude, and the Earth's Shadow.

An Eclipse of the Sun is; *Interceptio Luminis Solis, propter interpositione Luna inter Solem atque ætherum nostrum*, &c.

A Tab

SAUNDER. 1728.

A Table of Equation of Natural Days, for the better proving the Truth of the Motion of Clocks and Watches For the first six Months of the Year 1728.

Z	January		Febr.		March		April		May		June	
	m.	f.	m.	f.	m.	f.	m.	f.	m.	f.	m.	f.
1	8	47	14	47	10	0	0	41	4	10	0	59
2	9	10	14	48	9	43	0	24	4	11	0	47
3	9	32	14	46	9	26	0	8	4	12	0	34
4	9	54	14	43	9	5	0	7	4	13	0	22
5	10	15	14	40	8	51	0	22	4	12	0	10
6	10	35	14	36	8	33	0	3	4	11	0	3
7	10	55	14	31	8	15	0	52	4	10	0	16
8	11	14	14	26	7	57	1	6	4	8	0	29
9	11	32	14	20	7	39	1	19	4	5	0	42
10	11	49	14	13	7	20	1	31	4	2	0	55
11	12	5	14	5	7	1	1	47	3	59	1	7
12	12	22	13	57	6	43	1	57	3	54	1	20
13	12	37	13	48	6	24	2	9	3	50	1	33
14	12	51	13	39	6	5	2	19	3	45	1	46
15	13	5	13	29	5	46	2	30	3	39	1	59
16	13	18	13	18	5	27	2	41	3	33	2	11
17	13	30	13	7	5	9	2	51	3	26	2	22
18	13	41	12	56	4	50	3	0	3	19	2	35
19	13	51	12	44	4	31	3	8	3	11	2	41
20	14	0	12	32	4	13	3	16	3	3	2	50
21	14	9	12	18	3	54	3	24	2	54	3	10
22	14	17	12	5	3	36	3	32	2	46	3	22
23	14	24	11	51	3	17	3	39	2	37	3	33
24	14	30	11	36	2	59	3	45	2	27	3	44
25	14	35	11	21	2	40	3	50	2	17	3	54
26	14	39	11	5	2	22	3	54	2	6	4	4
27	14	43	10	50	2	5	3	58	1	56	4	13
28	14	46	10	34	1	47	4	2	1	45	4	22
29	14	47	10	17	1	50	4	5	1	34	4	31
30	14	49			1	13	4	8	1	22	4	39
31	14	49			0	57			1	11		

SAUNDER, 1728.

A Table of Equation of Natural Days, for the better proving the Truth. of the Motion of Clocks and Watches, the last six Months of the Year 1728.

M.D.	July		August		Septem.		October		Novem.		Decemb.	
	m.	f.	m.	f.	m.	f.	m.	f.	m.	f.	m.	f.
1	4	47	4	26	3	58	13	22	15	19	5	28
2	4	55	4	16	4	19	13	35	15	10	4	59
3	5	2	4	5	4	39	13	49	15	1	4	34
4	5	9	3	54	5	0	14	2	14	50	4	Watch 2
5	5	15	3	43	5	20	14	14	14	38	3	Watch 33
6	5	20	3	31	5	41	14	26	14	26	3	Watch 3
7	5	25	3	18	6	1	14	37	14	13	2	Watch 33
8	5	30	3	5	6	22	14	47	14	0	2	Watch 3
9	5	34	2	53	6	43	14	57	13	45	1	Watch 33
10	5	37	2	38	7	3	15	6	13	30	1	Watch 4
11	5	40	2	24	7	24	15	15	13	13	0	34
12	5	43	2	9	7	44	15	24	12	55	0	* 4
13	5	45	1	54	8	4	15	30	12	38	0	* 26
14	5	45	1	38	8	24	15	36	12	19	0	56
15	5	46	1	22	8	43	15	42	12	0	1	26
16	5	46	1	5	9	3	15	47	11	40	1	56
17	5	45	0	48	9	23	15	51	11	20	2	Watch 24
18	5	44	0	31	9	42	15	54	10	59	2	Watch 34
19	5	43	0	13	10	2	15	57	10	37	3	Watch 23
20	5	40	0	5	10	21	15	59	10	14	3	52
21	5	37	0	22	10	39	16	0	9	50	4	Watch 21
22	5	33	0	40	10	57	16	1	9	26	4	Watch 40
23	5	29	0	59	11	15	16	0	9	2	5	16
24	5	25	1	19	11	32	15	50	8	37	5	43
25	5	19	1	39	11	49	15	56	8	21	6	11
26	5	13	1	58	12	6	15	54	7	45	6	31
27	5	7	2	17	12	22	15	50	7	19	7	3
28	5	0	2	37	12	37	15	46	6	52	7	29
29	4	52	2	57	12	53	15	40	6	24	7	51
30	4	44	3	18	13	8	15	34	5	57	8	18
31	4	35	3	38			15	27			8	41

SAUNDER, 1728

The Equation of Time in the foregoing Table mentioned, ariseth from the difference of the Right Ascensions of the Equinoctial, and the Zodiack, together with the Equation of the Sun's or Earth's Annual Motion; whose sum if of like Denomination or Difference, if unlike, is the absolute Equation of Time, according to Mr. The Street in his *Astronomia Carolina*.

Hence 'tis concluded, that a good and well adjusted Clock, or Watch, ought to be at all times so much Faster or Slower than the apparent Time shewn by a good Sun-Dyal, as in the foregoing Table mentioned; and for the greater exactness in examining, 'tis best to compare by the same Sun-Dyal, and at the same time of Day, as oft as may be.

Of the Four Quarters of the Year: And first of the Spring,

Spring Quarter begins *March 9.* 15 m. after 7 Manè, the Sun then entring the first Point of *Aries*, (or the Earth *Libra*) making equal Day and Night to all (except under the *Poles*.) This Quarter generally is hot and moist.

2. Of Summer.

This Quarter begins *June 10.* 23 m. after 9 Manè, making the longest Day and shortest Night to all on this side the Equator. This Quarter naturally is hot and dry.

3. Of Autumn.

Autumn this Year begins *September 11.* 11 h. 14 m. Afternoon, the Earth then entring *Aries*, or the Sun *Libra*, again making equal Day and Night. This Quarter is naturally cold and dry, resembling melancholly.

4. Of Winter.

Which begins *December 10.* 58 m. Afternoon, making our shortest Day and longest Night, and is naturally cold & moist.

To find the Rising, Southing and Setting, of several fixed Stars hereafter mentioned.

IN the Tables following you have first the seven Stars Southing for every fifth day: In the second Table is set the difference betwixt the Southing of those Stars therein named, and the seven Stars, which difference being added to the time of the seven Stars Southing, giveth theirs. In the same Table is also set their semidiurnal Arches, thereby to find the rising and setting of the said Stars. Suppose it is required to

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know what time the great Dog-star, called *Syrus*, will be South the 11th of *February*? I then find the Seven Stars South at 5 hours 10 minutes, to which I add 3 hours 2 minutes the difference annexed to the great Dog-Star, and it makes 8 hours 12 minutes, being the time of its Southing the said 11th of *February*. If to the Southing you add the Semidiurnal Arch 4 hours 31 minutes, it gives the time of its setting at 12 hours 43 minutes; but if you substract the Semidiurnal Arch from the Southing, it leaveth the time of its Rising. The like may be done by any other of the said Stars.

For the better distinction of the several sizes of Stars they are divided into six several magnitudes. The biggest and brightest Stars are called Stars of the first Magnitude. Those of a size inferiour in light, and bigness, are called Stars of the second Magnitude, &c. Now for the better knowing the Stars hereafter-mentioned; Note, That the great Dog-star, *Lion's Heart*, *Virgins Spike*, and the bright star of *Lyra*, are accounted stars of the first magnitude, so are also *Aldebaran* and *Antares*, but they are Red Stars, much of the colour of *Mars*; all the rest in the Table are of the second magnitude, except the Northern and Southern *Aff.* which are small Stars, being of the fourth magnitude.

A Table shewing the Hour and minute of the Seven Stars coming to South, every 5th day of this year, 1728.

Months.	Days of the Month.											
	I		6		11		16		21		26	
	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.	H.	M.
January	7	A 57	7	A 36	7	A 14	6	A 53	6	A 32	6	A 11
February	5	A 49	5	29	5	10	4	51	4	32	4	1
March	4	A 03	4	13	23	3	4	2	46	2	2	6
April	2	A 71	48	1	30	1	11	0	52	0	3	6
May	0	A 14	11	M 54	11	M 34	11	M 14	10	M 53	10	M 3
June	10	M 8	9	47	9	26	9	6	8	45	8	2
July	8	M 5	7	45	7	24	7	4	6	45	6	2
August	6	M 3	5	45	5	26	5	8	4	49	4	3
September	4	M 10	3	52	3	34	3	17	3	0	2	4
October	2	M 22	2	3	1	44	1	25	1	5	0	4
November	0	M 22	0	2	11	A 39	11	A 16	10	A 54	10	3
December	10	A 11	9	A 49	9	26	9	4	8	41	8	20

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Table shewing the difference in hours and minutes between the coming to south of several fixed stars, and the seven stars, as also their semi-diurnal Arches thereby to find their rising and setting.

Names of the Stars.	Diff. semid.		Names of the Stars.	Diff. semid.	
	South.	Arches		South.	Arches
	<i>h. m.</i>	<i>h. m.</i>		<i>h. m.</i>	<i>h. m.</i>
Aldebaran B. eye	0 49 7	28	Lions heart, Basil.	6 23 7	13
Aln Orions Girdle	1 51 5	54	Virgins Spike	9 40 5	9
Ant. Dog. Sirius	3 24	31	Arcturus	10 32 8	c
Ant. 1st. head II	3 46 9	47	South ballance	11 54	40
Ant. Dog. procyon	3 54 6	32	North ballance	11 31 5	16
Ant. 2d. head II	3 57 9	4	Northern Crown	14 52 8	55
Northern Ail.	4 56 8	12	bright * Lyræ	14 57	lets not
Southern Ail.	4 58 7	49	bright * Vulturis	16 66	42

Here followeth some few Rules, and Tables, for the mensuration of Superficies and Solids.

For the Mensuration of superficial or flat measures, such as Board, Glas, Pavement, Hangings, &c. it will be necessary to know how to measure any plain superficial figure, as Square, Long-square, or Parallelogram, Triangle, Circle, &c. examples of all which do here follow.

I. How to measure a Square.

Let there be a square floor, or pavement, the sides whereof are each of them 5 feet 6 inches, 'tis required to know how many square, or superficial feet are contained therein. First (a plain way to avoid Fractions will be to) Reduce the whole side into inches, 5 feet, 6 inches, is 66 inches, multiply 66 by 66, and the Product will be 4356, the superficial content in inches; then divide 4356 by 144 (the square inches in one foot) and the quotient will be 30 feet, and 36 inches remaining, which is the number of inches in one quarter of a foot; so that in such a square is contained 30 feet and one quarter. See Margin.

$$\begin{array}{r}
 66 \\
 66 \\
 \hline
 396 \\
 396 \\
 \hline
 4356 \\
 4356 \\
 144 \\
 \hline
 30 \text{ (30)} \\
 432 \\
 36
 \end{array}$$

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II. To measure the Long-square or Parallelogram.

Suppose there be a Pavement whose length is 72 feet, and breadth 12 feet, how many feet is contained therein.

72
12
144
72
864

Multiply 72 in length, by 12 the breadth, and the product will be 864, and so many superficial feet are contained in that Pavement.

III. To Measure a Long Superficies, which is broader at one end than at the other.

Let there be a superficies whose length is 72 inches, the breadth of the greater end 50 inches, and the breadth of the lesser end 34 inches, and let it be required to know how many feet are contained therein. First, add the breadths of both the ends together, which maketh 84, take half thereof, which is 42, which being multiplyed by 72 the length, the product will be 3024 the content in inches, which being divided by 144 (the inches in one foot) the Quotient will be 21 feet, and nothing remaining, so that there is exactly 21 feet in such a superficies.

72
42
144
288
3024
144
288
144

IV. How to Measure Triangles.

All Right lined Triangles are measured by this general Rule. Multiply half the length of the Base by the whole Perpendicular. Or, the whole length of the Base by half of the Perpendicular. Suppose the Base of a Triangle be 44, and the Perpendicular 26, what is the Content.

Multiply 44 (the Base) by 13, (half the perpendicular) Product will be 572 : Or 22 (half the Base) being multiplyed by 26, (the whole perpendicular) the Product will be 572 before, which is the Content of such a Triangle.

V. All Trapezias, or Figures with four unequal sides ; Multangular, or many sided irregular Figures, must be divided into Triangles, and those Triangles measured as before is taught, and their sums added together will give the content of such irregular Figures. And note, that the least number of Triangles, which any plot or irregular figure may be reduced, will be by two than the number of the sides of such irregular figures.

VI. How to measure Circles, and parts of Circles.

The Diameter of every Circle hath such proportion to circumference of the same Circle as 7 hath to 22. There

The Diameter being given to find the circumference, you must multiply the Diameter by 22, and the product being divided by 7, the Quotient will be the circumference. Thus, suppose the Diameter of a Circle be 14, multiply 14 by 22, the product will be 308, which being divided by 7, the Quotient is 44, being the circumference of that Circle whose Diameter is 14.

Having the Circumference to find the Diameter.

Multiply the circumference given by 7, the product divide by 22, and the Quotient will be the Diameter. Let the circumference of a circle be 60, multiply 60 by 7 the product will be 420, which being divided by 22, the Quotient will be 19, and $\frac{2}{22}$ or $\frac{1}{11}$ which is the Diameter.

To find the Area or Superficial content of a Circle. Multiply half the circumference by half the Diameter, the product is the content of the Circle: Thus, Let the circumference be 60, the half whereof is 30, and the Diameter 19 $\frac{2}{22}$ the half whereof is 9 $\frac{1}{11}$, by which multiplying 30, the product will be 286 $\frac{4}{11}$ which is the superficial content of such a Circle; or,

By the Diameter to find the Area of the circle. First, square the Diameter, multiply the square by 11, and divide the product by 14, the Quotient is the superficial content of the circle.

Let the Diameter be as above 19 $\frac{1}{11}$ the square whereof is 364 $\frac{16}{121}$ this multiplied by 11 produceth 4009 $\frac{1}{11}$ which being divided by 14 the Quotient is 286 $\frac{4}{11}$ as above, being the superficial content of such a circle.

To measure the superficial content of half the circle, the quarter of a circle, or of any other section of a circle, more or less, having the semidiameter given.

Multiply half of the compass thereof by the semidiameter of the circle, so shall you have the content.

Of the Mensuration of Solids.

AS Plain or Superficial Measure consisteth of two dimensions, namely, length and breadth; so Solid measure consisteth of three dimensions, namely, length, breadth and thickness.

To measure any kind of Timber, either Square, Triangular, Round, or of any other Fashion, provided it be straight and equal all along.

Cast up the superficial Content at the end thereof, by the rules before going, for the finding the Content of the Square, triangle, Circle, &c. which Superficial Content being multiplied

plied by the length of the Piece, will give you the Solid Content thereof. *Example.* Let there be a piece of Timber, other solid matter) whose breadth is 18 inches, its depth 13 inches, and length 142 inches, to find how many solid feet contained therein. First, multiply the breadth 18 by the depth 13, the product is 234, being the superficial inches at the end of the piece. Secondly, multiply this 234 by 142 the length of the piece, and the product will be 33228, the solid Content in inches. Thirdly, divide 33228 by 1728, (being the number of cubical inches in one solid foot) and the quotient will be 19, 396 inches remaining, which is 19 solid feet, and almost quarter of a foot, and so much is the solid content of such a piece.

A 2d Example of a round piece. Let there be a round piece of Timber whose compass is 60 inches, and the length 20 feet, 240 inches) and let it be required to find the solid content thereof. First, by the help of the circumference 60, find the Diameter (as before is taught) by multiplying 60 by 7, and dividing the product thereof by 22, so shall you find the Diameter to be 19. Then by either of the ways before taught, viz. by multiplying the circumference by $\frac{1}{2}$ the Diameter; or by (squaring, or) multiplying the Diameter in it self, and multiplying that square by $\frac{1}{4}$, and dividing the product by 14, the superficial content of the end of such a piece will be found to be $286\frac{4}{7}$ inches. Now multiply this $286\frac{4}{7}$ by the length of the piece 240, and the product will be $68727\frac{2}{7}$ the content in inches, which being divided by 1728, the quotient will be 39 feet, and $\frac{3}{4}$ of a foot, and 39, $\frac{3}{4}$ inches remaining, which is the solid content of such a piece of Timber. But had this piece of Timber been measured by that egregious false way of taking $\frac{1}{4}$ part of the Girt for the side of the square, it would have been found to be but 31 feet and $\frac{1}{2}$ of an inch, which is above $\frac{1}{3}$ part less than the truth, it being 39 feet, & above 8 feet more.

In behalf of that erroneous way many do plead, that in great Timber there is great loss in chipping to bring it near a square; therefore that way may be allowed; but this is very unreasonable in great Timber there being little loss, in small Timber there is great loss, let therefore the quality be considered, rather than make unequal amends by a false quantity.

Of the Mensuration of Tapering Timber, either round or squared, or of the Frustums of Cones and Pyramids.

First find the superficial Area of each end of the piece, and multiply the one Area by the other. Secondly,

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the product of the two Area's, extract the Square Root, and add this Root and the two Area's all into one sum. Secondly, multiply this sum by one third part of the length of the piece, and that product shall give you the Content.

Let there be a piece of Timber whose Circumference at the greater end is 66 inches, at the lesser end 44 inches, and the length 20 feet, and it is required to find how many solid feet contained therein. First, the Area of the Circle at the greater end (by multiplying half the Circumference 33 by half Diameter $10\frac{1}{2}$) will be found to be $346\frac{1}{2}$, and the Area of the Circle at the lesser end will be 154: These multiplied together do produce 53361. Secondly, out of this product extract the Square Root, which is 231, (for 231 being multiplied by itself produceth 53361). Thirdly, add the two Areas and the Square Root 231 together, and the sum of them will be 731 $\frac{1}{2}$. Lastly, multiply 731 $\frac{1}{2}$ by 80 inches, (one third of the length) and the product will be 58520, being the inches contained therein, which inches being divided by 18, the Quotient will be 33 feet, and 1496 inches remainder, which is 3 quarters of a foot, and almost half a quarter.

To find the Content of Tapering Timber, other ways than is taught above.

These pieces being parts of Cones or Pyramids, their Contents may be found by seeking the Content of the whole Cone or Pyramid, (of which they are part) and the Content of that which is wanting, for that part being subtracted from the whole, the remainder must be the Content of the part required. Now the way to find the content of a Cone or Pyramid is, multiply the superficial Content of the Base by one third of the length; and to find the length of the top part of a Cone or Pyramid which is wanting; say thus, As the difference of the sides, or Diameters of the two ends, to the length between them; so is the side, or Diameter of the greater end, to the whole length. *Example*, of the piece before mentioned, the greater end is 66 inches about, and the lesser end 44; the Diameter of the greater end will be 21, and the Diameter of the lesser end will be 14, and their difference is 7, therefore say, If 7 give 20 feet what will 21 give? Answer, 60 feet, being the whole length of the Cone. Now the superficial

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content of the Base of this Cone. (being $346\frac{1}{2}$ inches) multiplied by 240 inches, (one third part of the length of the whole Cone) produceth 83160 inches, the content of the whole Cone. And the superficial content of the lesser end, (which is the Base, of the top (or wanting) part of the Cone) which is 154 being multiplied by 160, (one third part of the length of the top (or wanting) part) produceth 24640 inches, the content of the wanting part, which being subtracted from 83160, (the content of the whole Cone) the remainder is 58520 inches, the content of the part required, being the same as before.

Here followeth Tables ready calculated, for the Measuring of Squared or Round Timber, which is supposed to be equal all along: Their Use is thus; seek the side of the Squared, or compass of the Round Timber, in the first, third or fifth column of the Tables, and against it, in the next column, you have the length of a solid foot. Thus, the side of a squared piece of Timber being 20 inches, the length of a solid foot will be 4 inches and 3 tenth parts of an inch: And the compass of a round piece, being 80 inches, the length of a solid foot will be found to be 3 inches, and 39 hundredth parts of an Inch.

A Table, shewing how much in length will make a Solid Foot of any Square Stone or Timber: The side of the Square being given in Inches, from 1 Inch to 36 Inches square.

Side of the Square.	Length of a solid foot	Side of the Square	Length of a solid foot.	Side of the Square	Length of a solid foot
Inch.	Fe. inc. 10ths	Inch.	Inch. 10ths	Inch.	Inch. 10ths
1	144 0 0	13	10 2	25	2 8
2	36 0 0	14	8 8	26	2 6
3	16 0 0	15	7 6	27	2 3
4	9 0 0	16	6 7	28	2 2
5	5 9 2	17	5 9	29	2 1
6	4 0 0	18	5 3	30	1 9
7	2 11 2	19	4 8	31	1 8
8	2 3 0	20	4 3	32	1 7
9	1 9 3	21	3 9	33	1 6
10	1 5 3	22	3 5	34	1 5
11	1 2 3	23	3 3	35	1 4
12	1 0 0	24	3 0	36	1 3

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A Table shewing how many inches in length will make a foot solid, of any round piece of Timber or Stone, the Girt being known, from 12 inches compass to 100.

Com. len. of a foot			Com. len. of a foot			Com. len. of a foot		
Inch.	Inch.	100 p.	Inch.	Inch.	100 p.	Inch.	Inch.	100 p.
11	179	46	41	12	92	71	4	31
12	150	80	42	12	31	72	4	20
13	128	49	43	11	74	73	4	08
14	110	79	44	11	31	74	3	97
15	94	31	45	10	72	75	3	86
16	84	82	46	10	26	76	3	76
17	75	14	47	9	83	77	3	66
18	67	02	48	9	42	78	3	57
19	60	15	49	9	04	79	3	48
20	54	29	50	8	69	80	3	39
21	49	23	51	8	35	81	3	31
22	44	86	52	8	03	82	3	23
23	40	90	53	7	73	83	3	15
24	37	69	54	7	42	84	3	08
25	34	74	55	7	18	85	3	01
26	32	12	56	6	92	86	2	94
27	29	79	57	6	68	87	2	87
28	27	70	58	6	45	88	2	80
29	25	82	59	6	24	89	2	74
30	24	13	60	6	03	90	2	68
31	22	60	61	5	84	91	2	62
32	21	21	62	5	63	92	2	57
33	19	92	63	5	47	93	2	51
34	18	78	64	5	30	94	2	46
35	17	74	65	5	14	95	2	41
36	16	76	66	4	98	96	2	36
37	15	86	67	4	84	97	2	31
38	15	04	68	4	70	98	2	26
39	14	28	69	4	56	99	2	22
40	13	57	70	4	43	100	2	17

Advertisements.

ARTIFICIAL TEETH Set in so firm as to with them, and so exact as not to be distinguish'd Natural; they are not to be taken out at Night, as is by falsely suggested, but may be worn Years together; yet are so fitted as that they may be taken out and put in, by the persons who wear them, at Pleasure; and are an Ornament to the Mouth, and greatly helpful to the Speech. Also Teeth Cleaned and Drawn, by *John Watts* and *Samuel Rutter*, Operators, who apply themselves wholly to the said Business, and Live in *Reaquet-Court, Fleet-Street, London.*

Stool, Spring, and other sorts of Trusses, for Ruptures at the Navel, Groin, or elsewhere, being very easy and effectual to Old or Young; also Bag-Trusses for fixed Tumors, and Instruments to help the Lane or Crooked: By *Peter Bartlett* at the Golden Ball in St. Paul's Church-Yard, near Cheap, London. Persons in the Country sending their Bights, and which side the Rupture is on, may be supply'd with the Trusses, and proper Directions.

His Mother, *Mrs. M. Bartlett*, at the Golden Ball against St. Bride's Lane, Fleetstreet, is skilful in this Business to her own Sex: She also makes strait Stockings, Knee and Arm-Pieces, very useful for Swell'd Limbs.

Writing and Arithmetick, Taught by *Mr. Joseph Peppercorn* at Stamford in Lincolnshire: With whom Youth may be commendably Boarded for their speedier Improvement.

IF any Gentleman, or other Person, would have his Land surveyed, or any Building or Edifice measured, either by Bricklayers, Carpenters, Masons, Plasterers, &c. the Author of this Almanack will perform the same, either for Master or Work-men. And if any Person would have about his House or Gardens, any Sun-Dials, either Direct, Declining, Inclined, Reclining, Concave, Convex, or Reflective, he will make and prepare for them such as they shall desire.

*From Stap'eford, near Melton-Mowbray
in the County of Leicester,*

Die V, Sept. 13. 1734

